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Long Life For the Incurable?

DISEASES used to be divided into functional and organic. Those in the functional category were of no consequence; the organic were beyond reach.

The study of functional disease was discredited, because laboratory research failed to demonstrate any anatomic basis—ergo, there was always room for the assertion that no real disease existed. The patient was the victim of an imaginary ailment, the doctor administered suppositious remedies; ignorance and credulity registered a factitious cure.

In organic disease, the pessimist secured an easy victory—"Can you demonstrate the possibility of restoring a solitary lost cell? If so, you can as well restore a lost leg."

Here, as usual, the true point for therapeutic attack is overlooked. Our object never is the restoration of parts or organs to the *status quo ante bellum*, but, rather, such management of the patient as will secure to him the greatest possible remnant of life—a life that shall be happy and useful.

Apply this rule, and the prognosis of organic maladies becomes more hopeful. Take the case of organic heart lesions. I am fond of quoting the case of a Connecticut doctor, who requested me to listen to his heart. I did so; then looked up and nodded understandingly.

"How long have you had it?"

"Thirty-three years; first recognized it when a medical student."

"What have you been doing?"

"Work of a country doctor."

"How have you managed it?"

"Found just what I could do and limited myself to that."

I asked a young lady how she could play tennis so well, with her mitral lesion, which she understood as well as I do. "If you will notice my play," she made answer, "you will observe that I never try for a stroke I do not get. People strain themselves trying for what is beyond their reach."

A lady recently presented herself with a valvular lesion and a collection of prognoses varying from gloomy to gloomier and through to gloomiest. Yet, she has neither dropsy, cyanosis, nor permanent dyspnea; just a little pain, palpitation and oppression whenever her stomach bloats. There is a history of repeated attacks of rheumatism, of pneumonia last winter, of slight hemorrhage from the bronchi once. Examination shows a small area of dullness in the central right lobe of the lung, and a slight click is heard most plainly over the apex during the post-diastole or interval. There is no evidence of regurgitation or stenosis. A broken tendinous chord flapping?

This is the treatment: Very careful regulation of life; avoid elevations above 1200 feet; drift southwardly as the weather cools to the point of affecting lung comfort; exercise ever short of fatigue; weight to be restrained to near the normal of her 130 pounds, by expanding or contracting the daily ration of water; diet with care, eating physiologically, avoiding all that induces flatulence; bowels kept exactly normal.

In addition to the foregoing: A morning spoonful of a saline laxative and a granule of

podophyllotoxin at bedtime whenever the stools are dark and offensive; one to three milligrams of arsenic iodide at bedtime, to favor the absorption of the postpneumonic infiltration and the debris blocking the perivascular pulmonary lymph-spaces; a little malt extract with meals, to insure complete starch digestion.

Accessory: Friction of the skin over neck, shoulders, and chest with volatile liniment, the latter alternated weekly with towels impregnated with rock-salt—rubbing vigorously to redden the skin. The underclothing and stockings to be of pure wool.

What is the expectation? That she will live free from pain and discomfort, contributing to the welfare and happiness of family and friends, able to preside over her household (but not do housework), attend amusements, go to church, market, to do shopping, enjoy life, be useful, and live out to the full limit fixed by the tables of the actuary. Ill-directed, unmindful, or with intercurrent disease, she will die within a few years.

Talk of "curing" such disease is preposterous. Neglecting to treat such a sufferer is a crime.

Mister Man, your vital capital is represented by one thousand dollars..

You may manage it so that it will support your life pleasantly and usefully until you reach your three-score and ten.

Or you may consume your vital stock in one wild orgy and die in a month; or waste it in ineffective attempts to make it a million, and be a physiologic pauper in a year.

The dyspepsia on the farm, the autointoxication with its concomitant rheumatism, bad complexion, headaches biliousness, socalled malaria, vertigo, and eczema are frequently traccable to a table groaning with good things to eat.—Dr. John N. Hurty.

THE YESBUT

A newspaper published in Philadelphia, where they sure ought to know all about it, wittily describes the Yesbut.

The Yesbut is the man who greets every new plan, idea and proposition with a sickly smile and the frigid handshake of doubt, fear, and hesitation. He is afraid of anything so radical as thinking for himself, much less trying any new thing. He must wait until the authorities have approved, until the new tenet has become orthodox. The real Yesbut wont use hyoscine-morphine anesthesia until the Mayos have adopted it. He would not think of trying calx iodata in croup until the Council has O-K'd it. He never employs active principles, because he might be suspected of being tinged with Abbottism. He is too cowardly to exert himself to save the lives of men and women and little children who are dying around him for want of such modern remedies, from fear of what somebody else might say.

Opposed to this Yesbut, our Quaker contemporary places the Tryitout. Tryitout's aids are Energy and Enthusiasm. His searchlight is Hope. His brake is Common Sense. His motor is the earnest determination to do something, to do good, to save lives, to stop suffering. He is a man of deep religious sentiment, and he firmly believes in the existence of a good God, a being who never permitted an ill to afflict humanity for which he did not also provide a remedy, and one within the reach of such wit as He endowed man with.

The Tryitout's robust, active faith is a comfort and an inspiration to those who feel their own faith weakening.

He listens to a new scheme, and while pointing out its apparent faults is ever ready to scan it for possible good; and to encourage its originator to further trials by trying it himself. He never likes to lose any possibility of bettering his means of doing better work. The worst he can say of a new idea is, "There may be something in that."

Our eastern authority evidently has the history of Philadelphia at his pen's end—he has two local examples of the Tryitout to cite. One is John Wanamaker—where did they get him? "He has never yesbutted an idea, no matter how new and startling it may have seemed."

For the other progressive Quaker, they have to go back to that immigrant from New England, Benjamin Franklin. He was "the blue-ribbon Tryitout." "Those who laughed at his key and kite are now a part of the dust that fringes the right of way of some electric railway."

"The Tryitout is the true progressive. He has grit, go-ahead, and gumption. He knows, as you and I know, that, if no one ever dared to break the rule of doing as father bid, we still should be living in caves and trading stone hatchets for juicy roots. He knows that all the advances that we have made since the gate of the Garden of Eden banged behind our kin have come through trying-out."

Which are you, doctor, a Yesbut or a Tryitout?

A little of both? Then, why not culti-

vate the Tryitout tendency and let it develop into your predominating trait?

Did you ever get any good thing by not trying?

Are not your most valued remedies and methods derived from the experiments you did muster up courage to try?

If others feel so sure that they are getting good results from the sulphocarbolates, copper arsenite, cactus, gelseminine, solanine, and all this host of novelties, why should you linger along in the rear with your antiquated tinctures and extracts?

Why don't you get an "auto" and give old Dobbin a vacation?

Think the science and art of therapeutics stopped with Bartholow a quarter century ago? Think these serums and bacterins and vaccines and antitoxins are illusions and fakes? If the others are getting such good results from them, maybe you had better get illusioned a little yourself.

Go off and sing! The trouble drifts
Whenever spiritual singing lifts
Its music of the heart of things
On melody of trusting wings.
Go off and sing! The cloud will fly,
The golden morning mount the sky,
And in thy heart again its beams
Kiss bright the fading glow of dreams.

—Baltimore Sun.

INSTRUCTION IN SEX HYGIENE

At a meeting of the Chicago Medical Society, held on October first, there was a notable discussion of the problem of instructing our children and young people in knowledge of the sex functions. The speakers were Prof. Charles R. Henderson, of the University of Chicago, Dr. William T. Belfield, Dr. Rachelle Yarros, Mrs. Ella Flagg Young, superintendent of the Chicago public schools, and the Rev. Dr. Melody, of the Catholic University at Washington.

Naturally, various views were presented, and the matter was approached from all angles—biologic, sociologic, pedagogic and theologic. In spite of this, there was a surprising unanimity of opinion as to essential principles, the one really dissenting voice being that of Dr. Melody, whose attitude was that of the Catholic Church, which opposes sex-instruction in the school and would relegate the whole matter to the home and the church—looking upon it purely as a question of morals.

Most of the speakers were agreed that there was necessity for such instruction. The parents cannot always be depended upon to give the right kind of teaching, and it remains for the school to do so, unless the work is to remain undone and the children are to be brought up in ignorance of the full significance of sex and its responsibilities.

In illustration of parental stupidity, one speaker told of several little girls who had been enticed into a lumber yard, where liberties had been taken with them. Their teacher and the principal of the school which they were attending were appalled. The children did not seem to understand fully that they had done something very bad, so their mothers were summoned. Imagine the surprise of these teachers, when one of the mothers, after hearing the story, promptly slapped her little girl—not because of the wrongdoing but because "she hadn't minded her teacher!" This mother's mental attitude was that of the other women.

Admitted the necessity for sex-instruction in the schools, there is a vast difference of opinion as to how, when, to whom, and by whom it is to be given. That there is danger of attracting too much attention to the sex function and by so doing stimulating sex-curiosity and the very desires which should be kept under control, most of the speakers admitted. That it is not easy and perhaps unwise to take it up in the primary grades, was also admitted. The ideal, as Dr. Henderson pointed out, is a method of education so constructed that *special* instruction in sex matters will become unnecessary—a method which will make the acquisition of such knowledge a natural part in the development of the child.

Mere instruction in the function of sex, even when presenting the facts regarding the physical and moral suffering which may result, is not a sufficient deterrent from sexual immorality. Men who know all about the ravages of gonorrhea and syphilis, and young women who know all about the dangers of becoming pregnant, do not hesitate to enter illicit relationships. The man may have learned that it is possible to protect himself against disease by simple local medication, and the woman may have learned to "take care of herself;" but whether they have or not, when the impulse to sexual intercourse seizes them—essentially a biologic impulse, inherent in every living thing—too often they yield. The only safeguard is strength of will developed by years of true *education*, built upon a sound character, and ennobled by an ideal conception of the beauty, the chivalry, and the responsibility of their sex.

We cannot expect the school to build such characters alone. The greatest source of power is the home; but the school can and should provide the essential instruction and supplement it with inspiration to clean living. It is because of her insistence upon the importance of the character element in this training that Mrs. Young insists that the physicians selected to give sex instruction in the Chicago schools shall have more than the technical knowledge necessary; more than the ability to present facts intelligently and with force. They must know how to idealize the subject, lift it out of the plane of the sordid and away from the possibility of vulgarity or smut, and show that it is associated with the nobility and beauty as well as with the crass realities of life.

Tell the young folks the truth. It will not hurt them if told in the right way. The danger lies in the foul suggestiveness to which they are exposed everywhere and against which the best bulwarks are knowledge and character. Both of these should be developed —in the school and out of it.

How much more information have you got today than you had yesterday? Understand, it's a question of mathematics. If you are going to go on taking more money out of the world you've got to go on developing the mental muscles with which you take it.—Thomas E. Dockrell, in "The Caxton."

SEX PROBLEMS: SOURCES OF INFORMATION

Requests for information concerning the problem of sex instruction are growing increasingly common. For instance, within the last two days we have received letters from two physicians about proposed lectures on sex-hygiene. One of these men is to address classes of children at a church and also to give several talks to the young men of a National Guard regiment in a large city. The other is looking for someone to talk about sex matters before the Y. M. C. A. of his town. Both these men request us to prepare lists of books which they can read in preparation for these courses, as well as the names of works of a popular character that may be recommended to others. This we will attempt to do to the best of our ability.

First, what shall we give the children? We know of nothing better than Dr. George F. Butler's "Every Boy's Book" and "Every Girl's Book." These are intended for children old enough to read, say from eight to fifteen years of age. Also, they are admirably adapted for use by the fathers and mothers, since they present a simple method of instructing children along natural biologic lines.

An excellent book for parents to read is Dr. William Lee Howard's "Start Your Child Right." In this volume Dr. Howard has endeavored to "translate medical terms into plain everyday words," thus giving the reader what he wants to know and should. Dr. E. B. Lowry has published a series of five books upon sex topics, chastely written, yet not lacking in detailed facts. Of these, "Truths" is intended to provide the information necessary for boys; "Confidences" is designed for the young girls; while "Himself" and "Herself" are for older readers of either sex. Of small booklets for lay reading, the "educational pamphlets" of the American Society of Sanitary and Moral Prophylaxis can be recommended. The volumes of "Transactions" of the same organization should be familiar to every physician.

Of larger books upon sex for the layman, Lydston's "Sex Hygiene for the Male" stands well near the top in scientific importance as well as in literary interest. This is a good compend to place in the hands of young college men. "The Boy's Venereal Peril" answers the need where a very small pamphlet covering one phase of the subject briefly is wanted; it is published by the American Medical Association. A good small volume for the adult lay reader is Dr. Henry B. Hollen's "The Taint."

The physician should know more about the sex question. With the anatomy, physiology and pathology of the sexual system he is, of course, familiar; few, however, give special thought to the deeper biologic and psychologic problems involved. Any doctor is likely to be called upon for information, and many, in the very near future, will be asked to give talks or lectures upon these subjects. Be prepared.

To begin with, read up on heredity. The discoveries of Mendel, De Vries, and other modern researchers have completely revolutionized our conception of the nature of the inheritance of physical and mental traits. Bateson's "Methods and Scope of Genetics" gives a good introduction and is inexpensive. Davenport's "Heredity in Relation to Eugenics" is an exceptionally fine work on the subject and presents facts with which every physician should be familiar. The author is director of the Carnegie Institute's research-work in heredity.

Every physician studying sex problems should be familiar with the writings of Dr.

William J. Robinson. They are advanced—radical. The average physician will disagree with much that Dr. Robinson has to say; yet, all the more reason why he should read his books. "Never-Told Tales" and "Sex Problems of Today" should be in every physician's library, and every student of sex must read *The Critic and Guide*, in order to clear his ideas upon these debateable problems.

For information concerning the mental phases of this topic, Havelock Ellis series of six volumes on the "Psychology of Sex" stands in a class by itself; while the student of the social evil can get accurate information concerning prostitution and the venereal-disease problem by reading "The Social Evil in Chicago" (the report of the Chicago Vice Commission) and "Commercialized Prostitution in New York" (the report of the Rockefeller Bureau of Social Hygiene).

We have given a rather long list, and, yet, we know we have omitted many excellent works. However, those that have been cited probably afford a sufficient outline for the needs of the doctor as well as of the layman he may be called upon to advise.*

RECEPTION-ROOM AND OFFICE

We should do well to bear in mind that the visit of the patient to the office, which to the physician is a mere incident in the day's work, is to the patient an absorbing, nerve-racking event, upon which his mind is more or less morbidly concentrated, and in consequence he is in an exceedingly sensitive and impressionable frame of mind. The furnishment of the waiting-room, therefore, ought to be so ordered as not to intensify this morbidness, but rather as much as possible to counteract it and to restore the patient's normal poise.

Photographs of operating-theaters or hospital wards, pictures and prints such as Rembrandt's "Lessons in Anatomy," grinning skulls and ghastly skeletons, and like examples of professional art are scarcely inspiring objects for the contemplation of a sensitive person waiting for even the most trifling operation or awaiting a verdict of life or of death. Even such a work of art as Luke Field's "The Doctor" is, in my opinion, out of place. It is a beautiful painting, with a touching significance, but the doctor's reception-room is not the place for a patient to be touched.

Of course, one should not rush to the other extreme and make the ostentatious gaiety of the room a mockery of the patient's misfortune. A simple cheerfulness is the keynote. A light, cheery room, with no suspicion of "shop" about it; a few dainty touches such as a woman's hand can give it (encourage the attendant to exercise her feminine tact in this direction); some interesting pictures of wholesome, vivacious scenes from nature and the lighter side of life; and, above all, if practicable, a nosegay of bright, simple flowers upon the table; these things will go a long way toward calming and cheering the waiting patient's perturbed and anxious spirit.

When one comes to the consulting-office itself, while the same tactful consideration of the patient's sensibilities should prevail and all that is likely to grate upon his overwrought nerves kept in the background, it is not well to carry the ingenuous idea too far. The patient is here for a serious purpose, and it is both a slight upon his claims and a reflection upon the doctor's good sense to make any show of dalliance at this point.

To be sure, the patient does not wish to be "impressed" with a glittering display of formidable surgical instruments or an imposing array of bottles, or with any such mistaken ostentation as that; he does expect, though, a certain quiet, business-like attention and preparation—a clearing of decks for action, so to speak—bespeaking adequate equipment and confident readiness for the work in hand.

Any attempt at decoration or artistic effect in the consulting-office itself is in bad taste. As before intimated, the patient is here for business, and he is entitled to serious, business-like treatment in every way. The more severely and plainly the office is equipped, the better; let all apparatus and material be kept out of sight as much as possible, but everybody and everything wearing the air of alert attention and adaptation to the patient's immediate needs.

These may seem like trivial matters; but it is the little things that count in dealing with people, especially with people who are in the peculiarly sensitive and impressionable state of mind of the ordinary patient. The psychology of the office and the reception-room is no mean factor in conducting a successful practice.

We greatly desire to secure the opinions of our readers as regards the arrangement and equipment of the doctor's office. We hope

* We shall be glad to supply any books mentioned in this editorial. Prices will be furnished on application. "The Social Evil in Chicago" is not for sale, but may be seen in any large public medical library.

that those who have given the matter special thought, and who have worked out "schemes" that seem to them satisfactory and whose offices are planned to promote efficiency and comfort will write us, sending plans (merely sketched out) and, if possible, photographs.

The substantial professional service that a well-planned and attractive office can render is a matter of more than minor importance. Let us hear from all those interested.

A man's "single aim" in life: You see him, do you not? His face is set; you can almost hear his teeth grip themselves together. He is a splendid young Saxon. He has but one arrow for his long-bow of ash. If he misses the cornered boar, that faces him with head swinging from side to side and foam dripping from its red mouth, the man of the "single aim" will be slit to ribbons. His whole world is a bow, one arrow, the boar, and that "single aim"; then life or a horrible death. That is the sort of single aim in endeavor, that, if one can get it, will work miracles.—Ladd Plumley.

HOUSEWORK: SUFFRAGE

To Americans, the difficulty into which our English cousins have tumbled seems incomprehensible. The solution is so easy, the proper course of action so evident. If woman wants the ballot, why in the name of justice and right and manly courtesy don't you give it to her! Wake up, John! Don't you hear what the lady says? She wants to vote. Hustle up; stand aside and let her pass! Where are your manners!

That she *wants* to vote is all sufficient reason for permitting her to do so. Voting will not unsex her or make a man of her. Nothing will do that. Nature has interposed her fiat. The watch may grieve that it cannot be a threshing machine, but the fact remains that a watch it is and must remain.

Man and woman are, and will, remain radically different. The man earns the living. Woman makes life worth living. Without the other, each is as worthless as one blade of the scissors. While man works woman supplies the object, the incentive to work. That either should assume superiorty for his other part in the compact is preposterous.

The woman's part has ever been to adorn the house, make it the haven to which the man's steps turn. "Whom will I have to go home to when my day's work is done?" was the agonized cry of a husband when told of his wife's death. To bear and rear children; to prepare the food, the clothing, nurse the wounded; this has ever been the woman's part.

Analyze it, and it is evident that she and her work comprise all for which men hope and work. Without home, wife or child, man is but beast. Every effort, every advance, every aspiration of man from the troglodyte till now has been prompted by the desire of enhancing the home life. Civilization, religion, law, altruism are so many evidences of what woman has inspired in man.

Yet—where is the woman who appreciates her exalted place? We have known possibly ten thousand women, of ten thousand varieties, comprising every variety except the one that loves housework. Why? Because they do not respect it. No woman mentions housework without complaint or sneer. Just as soon as the family rises high enough, her first thought is, to roll this burden off on some other woman. The one who assumes the burden loses caste thereby, incurs the contempt of her sex, receives the degrading appellation of "slavey," "domestic," servant," and is derisively classed as K. M., scullion, pot-walloper. Ingenuity is exhausted in devising terms expressive of her reproach.

The streetwalker may be avoided in public, but in private she is the object of deep interest. Her methods of attracting male notice are studied and copied. She, this outcast, is the arbiter of fashion; her successes are the envy and exemplar of her sex. She shows her charms in public, on the stage; her clothes are the patterns, her jewels the despair of her sisters; and when at last she carries off triumphantly the matrimonial prize of the season, her debatable past is forgotten and her success becomes the study of many a would-be imitator. The price she paid many another feels willing to pay for similar success. The market is through with sellers, intent on making the best bargain for their wares.

Be she never so virtuous, so helpful, so skilful, the kitchen-maid is despised. This is the problem confronting the housewife—the increasing difficulty in inducing women to assume menial duties, positions that degrade them. Wages rise, the quality of service sinks, till untrained, inexperienced "help" gets a wage our grandmothers would have been horrified to pay for consummate skill in this department.

The whole arrangement of the modern household has been turned over to meet the difficulty. For lack of serving-maids, we have exchanged the house, that was our castle, for the flat. Nine-tenths of woman's work is done outside the home—there's nobody to do it there. Does any spinster now spin?

Does any daughter (milker) now milk? Or brew, bake, weave, wash, iron, gather simples, make clothes, knit, or do any of the housewife's work as in the days of good Queen Bess? Or does she educate her children?

And, yet, "if there be a heaven upon earth," is it not when a man after a full day's labor returns to his loved one, who has spent her day's labor upon that home? The welcoming face at the door, the clean, orderly house, the kettle singing on the fire, the table with snowy cover, spread with the dainty grace, the food our love prepared as lovingly thoughtfulness dictates, the sprightly wit that drives away care and makes one forget fatigue, the sweetest, closest, companionship man's spirit can enjoy—ah-h!

Housework, housework! Where is the new Leader, the Messiah, who can open the eyes of woman and let her realize that by this she may make of this earth such a paradise that one need not wait for the one after death? Who will replace the Bacchante, the diademed Empress, yes, the Cecilia with eyes heaven-bent, with the truer and better ideals, the Lady with Broom, the Mother mending clothes, the First Wholesome, Handsome Loaf?

What legislation will enact statutes providing a four years' course in Domestic Science, the diploma of which alone will entitle the girl to a marriage-license? When will county fairs offer rich prizes for the best gardens, the best darned socks, the best ironed shirts, and mended coats; and for essays, with examples, on preparing potroasts, pies, vegetables, cereals, on economic but sufficient dietary lists; on the selection and care of provisions; on balanced human rations, made palatable and appetizing: on wildlings usuable, and on the innumerable opportunities open to the housewife?

The presence of a thought is like the presence of the woman we love. We fancy we shall never forget the thought nor become indifferent to the dear one. But out of sight out of mind! The finest thought runs the risk of being irrevocably forgotten if we do not write it down.—Arthur Schopenhauer.

AFTER MALARIA—WHAT?

When the first opposition to vaccination had exhausted its virulence, and that "preposterous vagary of an erratic brain" had to be admitted as an established fact, the profession and the educated public promptly went to the other extreme, that of enthusiasm. The wildest estimates were made as to the result upon the general longevity. It was calculated, since variola had destroyed a large proportion of the human race, that, by the cessation of this one pest alone the average of life would be materially increased.

As time elapsed, it became evident that these optimistic predictions were not realized —and the reason proved to be the intervention of an element that only a close student of human affairs could have foreseen.

Other infections, such as scarlet-fever and measles, had previously taken a certain proportion of the children away, and, since there were many more of the little ones than when smallpox killed off such a host, there were many more left to furnish food for the other pests. Those saved by vaccination did not all live to grow to maturity, but many died of some one of the other infants' fevers. There was, indeed, an increase in the average longevity, but it was not nearly as decided as had been expected.

When the fertile plains of southern Illinois were first settled by the whites, malaria grew so prevalent as to become proverbial. The name of "Egypt" instantly brought after it the thought of ague. The denizen of the prairies was popularly represented as carrying an "ague-stick," which he used instead of tobacco; as eating quinine on his bread, in place of sugar; and as making dates with reference to his alternating periods for "shakes." One noted writer went so far as to condemn the whole population of our southern regions as degenerates in mind, morals, and physique, because they inhabited the "malarial belt."

As the soil came under cultivation, the malaria gradually subsided. The swamps were drained, the mosquitoes remain, but they are not so universally infected. Why? Whence got they the malaria plasmodia in the first place? Was it in the soil when first turned over by the plow? Did the germs flourish upon some weed or animal since exterminated?

An observation made many years ago may serve to indicate one possibility, and to show that despite acceptance of the mosquito transmission the last word has not yet been said on malaria:

When a deep excavation for a water-pipe was made in Port Richmond, in the northern part of Philadelphia, about thirty years ago, several victims of malaria applied to the present writer for treatment, along the first square that was opened up. When the next block was opened, more cases of malaria arose along it; and for two miles the opening of each block was followed by malaria in that

block. In lieu of a better explanation, the causes of the malady, it was surmised, were lying dormant in the soil until brought to light and activity by the disturbance of the deeper layers.

Since malaria in the former acceptation of the term is a thing of the past in our southern counties of Illinois, has anything arisen to replace it? It would be interesting to receive replies to this query from the older practicians of that region, those who practiced there during the former prevalence of the disease and are yet in the harness.

It is not likely that there has been any development of other maladies, as in the case of the extirpation of smallpox. Malaria did not kill; it attacked adults rather than children; and its cessation has left the people more vigorous and better qualified to withstand the attacks of other maladies than when they had been debilitated by the chills. But it would seem probable that the effect should be manifested in another way.

Malaria was not suddenly cut short, as was smallpox, but rather subsided slowly and imperceptibly. It might be expected that instead of the old-fashioned chills we should see manifestations of milder forms of the infection, possibly as anemias or neuroses. Has there been any such development in "Egypt"? Has "ague-cake" entirely disappeared? Has there been a decided reaction, and a marked improvement in the physique and the mental powers of the "Egyptian" over what he presented when Billings perpetrated his celebrated libel?

The writer's personal observations do not go far enough south in these states, having been few below the middle of Illinois. In this section, however, he has been struck by the prevalence of a marked type among the women—the number of healthy, hearty, wholesome girls—clear-eyed, rosy-cheeked, with well-developed and symmetric figures, strong and capable, and with amiable, happy dispositions. They often are large and plump, but undue corpulence seems rare even in the middle aged.

I never visit this region but I wonder why the men, who bewail the degeneracy of modern women and their unfitness for wifehood and motherhood, do not go there. The man who wishes to marry a helpmate, and not a doctor's bill, might take notice.

Ideals change with the years. The time has gone when men looked for the fragile wisp of a girl, too ethereal for a diet of aught but caramels, too sensitive to endure the thought of a caterpillar, too useless for any place but a harem or a sanatorium—a millstone about the neck of her unfortunate male meal-ticket.

The woman of today is strong, capable, self-reliant, claiming to stand by her brother man as an equal, daring him to show her tasks for which she can not find a capacity that must at least exact his respect. She is a human being, with well-developed muscles, and with reasoning powers that challenge his best efforts to keep abreast of her. She is no weakling, but ready to fight for herself; alone, if need be, by his side in preference; since her qualifications to a great extent complement his own, and the equal partnership affords greater success than either can win alone. But the equality she demands—and deserves.

The Mid-west is the corn-land, where the greatest of cereals grow to their highest point of perfection. For many other natural products this section is noted; but has anybody else realized the unexcelled quality of its product of women?

It would be difficult to find a farmer's house which does not harbor patent medicines. If you go into his cellar, the patent medicine bottles are likely to be heaped in the corners; if you go into his bedroom, they are there; in the kitchen, they are on the shelves and in the cupboard; the ash-pile is topped with them; they stand on the beams in the barn, and, if you go into the woodshed and the smokehouse, lo! they are there.—Dr. John N. Hurty.

PYELOCYSTITIS: THE INTERNIST'S WAY

The surgeon has taken to himself the genitourinary system, leaving to the internist little except the scraps. Far be it from us to decry the results of our brilliant successor's labors in this field, nevertheless we cannot help asking whether in every case the mechanical method is perfectly satisfactory and in its final results leaves nothing to be desired. What!—in every case? Are there no exceptions? Then, indeed, has a new chapter been added in the history of human endeavor.

Man is not merely a "case" but is a human being, having individual characteristics. One of these peculiarities occasionally making itself known is an unwillingness to be despoiled of the various apparatus with which nature chose originally to endow him. We may asseverate never so earnestly that the removal of his palate inhibits further experiences of bad taste, that the abscission of his nose prevents the annoyance of bad smells, and that by similar subtractions he may be relieved of sundry and divers temptations lead-

ing to woful adventures. But it seems he prefers to keep his faculties for suffering, and to acquire wisdom at his own cost instead of accepting it second-hand.

Here is an illustration: A youngish man has pyelitis of the right kidney, infection-cystitis, hyperemic prostate gland, vesical irritability, free discharge of pus from the urethra, besides other symptoms. He has been urged to part with his prostate gland and the affected kidney, to have a drainage-tube inserted into his bladder and renal pelvis, not to mention a pleasing assortment of other surgical "help" that have been proffered. (N. B.: He has money.) To each and all of these seductive suggestions he has turned a deaf ear—and no aurist in reach!

At last he falls back upon the internist.

Upon investigating the situation, the internist finds that the urine is free from blood, casts, and albumin; the urinary solids are excreted in normal quantity and proportions; pus follows after the discharge of clear, normal urine.

Treatment? The use of renal irritants is forbidden; any exercise inducing discomfort or pain is taboo; the man is told to return to his vocation and cease to look on himself as "lost." He is put upon a regimen of one grain of calcium sulphide and 1-64 grain of arsenic sulphide taken before meals and at bedtime, until his urine no longer contains microorganisms. He is to take a grain of arbutin four times a day as long as pus is detected in the urine.

The medical attendant now procures a long-nosed uterine syringe, smooth at the tip —for the normal urethra is sensitive; the inflamed, exquisitely so. He has ready to hand, warmed, an antiseptic (in the shape of a perfect solution of thymol iodide in an aromatized neutral oil), draws a little of it into the syringe, lubricates the nozzle with the same, and then carefully, delicately inserts it into the urethra, pushing forward until the prostate gland is reached. At this point he expels a few drops of the oil, letting it escape from the meatus naturally. If any of it enters the bladder, well and good.

This injection is repeated once every day for about a month or until all undue sensitiveness has subsided. The use of the arbutin is kept up for about six months, or for twenty-four even if need be. The bowels are kept free—the sympathy between rectum and bladder is close.

Results?

Now, if you have enough faith or any curiosity—go ahead and try it yourself. Then you'll write and thank me—possibly divide.

If you haven't—good night!

Was die Welt morgen bringt,
Ob sie mir Sorgen bringt,
Leid oder Freud,
Komme, was kommen mag,
Sonnenschein, Wetterschlag,
Morgen ist auch ein Tag—
Heute ist heut!

A PLEA FOR OPIUM

Medicine seems to have fads and fashions, just as manners and dress have. Formerly it was our habit, as physicians, to use opium to the point of abuse; nowadays it is the fashion to rail against the use of opium at all.

In our recoil from one extreme, we have swung to another. Yet, we believe, that, if the real opinion of the most scientific and successful of our practitioners, and especially of our surgeons, were canvassed, it would be found that they still entertain a great respect for the drug and continue to employ it, or some of its derivatives, quite extensively.

Opium has at least one therapeutic virtue which, to every physician and surgeon of experience, gives it a sovereign place in the treatment of a certain class of trouble—its power to enforce physiologic rest. In this respect, opium has no superior, if it have an equal.

The value of physiologic rest in highly inflammatory and hyperesthetic conditions can hardly be overestimated. Especially is this true of the gastrointestinal tract, the pelvis, and the peritoneum. Anatomic rest is usually sought and insured by the patient himself. Pain forces him to take the posture in which the muscles will be put, as much as possible, out of action. He is glad to lie down, with the skeletal and systemic muscles immobile. But physiologic rest is of even more vital importance in such cases, and this, as a rule, is attainable only by the administration of some form of opium.

Alonzo Clark used to give his peritonitis patients enough opium to make them blue and cause them to snore. That, of course, is a practice hardly to be commended as routine treatment. But any man who has had any considerable experience in the treatment of acute peritonitis has learned the enormous value of physiologic rest; and the same principle applies to all acute conditions of the pelvis and abdomen.

Nobody desires a return to the old excessive, indiscriminate use (or rather abuse) of opium.

The therapy which was wont to meet every pain with a shotgun dose of morphine or a dram of laudanum belongs to the dark age of practice, and has properly been relegated to the scrap-heap. But a practice which utterly disregards the drug is equally irrational, especially in view of the fact that one of the principal objections to its intelligent use has now disappeared, namely, the uncertainty and impurity of its preparation and its pharmacology.

The opium of that older practice of which we speak was not standardized at all. Later the drug was standardized upon the content of morphine, then morphine began to replace the crude drug. Then the other active principles of the drug began to be isolated and used—codeine, for instance.

With the pure and accurately standardized preparations of morphine, which are, at least, perfectly possible of production in these days of refined pharmacy (and we can tell you of one preparation, at all events, which measures up to this standard), the physiologic effects of opium can be secured with well-nigh infallible accuracy and balance. And, I repeat, I do not believe there is any adequate substitute for morphine for the relief of pain; all other measures (of a purely therapeutic kind I mean, of course) are mere make-shifts.

I realize, and admit with sorrow, all the tremendous crimes that are to be laid at its door; but I still believe it has a wide range of usefulness and value, if wisely and advantageously employed, in forms and dosage of known standardization.

You can't think too much. It may be somewhat painful to do it. They even say that a man killed himself by thinking, but the chances are if he hadn't thought himself to death he might have been shot in some thoughtless moment or hung for not thinking, so the odds are even in the end.—M. N. Goodnow.

EXPERIENCE AND ENTHUSIASM

It was the late Maurice H. Richardson, we think, who, in an address to a graduating class of medical students, pointed out the wisdom of that order of nature which governed the sequence of intellectual inheritance. "For who could doubt," he pertinently asked, "what would be the effect upon progress if our successors were to begin their work influenced exactly as we are by our own experience, where we lay the work down?"

Experientia omnia docet. Actual experience teaches the individual up to a certain point, and it makes him to a greater or less degree wise. But it also makes him timid, cautious, and disinclined to break away from the traditions of the past. The beginner, who has to learn in the dear school of experience, strikes out for himself. He disregards the warnings of his elders. He does harm, in so doing, in grasping for the good; but he seeks, and obtains, good that is new. He leaves beaten paths and makes new ones. Hit or miss, he brings to bear the originality that is in him, untrammeled by the teachings of a past generation, with an aggressiveness that overthrows all traditions, musty and valuable as they may be.

Following in imagination the course of the individual worker through coming ages (could he retain his bodily and mental vigor and live to be as old as Methusaleh), one must get the conception of a powerful intellect brought to a standstill by the accumulation of the experience of centuries; a body, as it were, which has ceased to move in any new direction, retarded and silenced by its own ideas and environment; not unlike the moon, which, through the friction of its ancient tides, has ceased to rotate on its axis faster than it revolves about the earth—which latter itself will, for similar reasons, one day rotate upon its axis but once a year.

This masterly conception of Richardson has a peculiar application and significance in the case of the medical man. For medicine, of all the practical arts and sciences, is in a constant flux of change and advancement, wherein "the old order changeth, yielding place to new." Here, if anywhere, it is possible for "one good custom to corrupt the world."

For this, if for no other reason, all attempts to legislate or otherwise to crystallize principles and modes of medicine are doomed beforehand to failure, and to the extent that they temporarily succeed they bring worse than failure.

Every physician, the practitioner no less than the research-man, is *de facto* a unit in a body of original thinkers and workers; and to the extent that he fails to exercise this faculty of originality he falls short both of his privilege and his duty.

I do not mean to say, of course, that the doctor is to cut loose from all the experience and wisdom of the ages and rush in where angels fear to tread. However, he is under obligations to use his own brains in his own way, independently of all mere tradition and sheer authority, accepting all that the past and the present offer him as his tools, not as his masters, and fearlessly striking out his own way with their help. So doing, it will

go hard; but, then, he will contribute something new and original to the progress of his science; and such is the democracy of science that the humblest may do this just as well as the greatest.

Incidentally, we expect that our readers, to whom this little homily is addressed, will give the "family" as well as the profession at large the benefit of their original achievements, through the pages of CLINICAL MEDICINE.

"Mistakes creep in." See them, the horrid little things; grotesque dark pigmies, sneaking and crawling into some unnoticed corner where they have no business. See them grin at you after it is too late and they have done their successful creeping, hear their Satanic word chucklings!—Ladd Plumley.

THE MANAGEMENT OF ORCHITIS

The treatment of orchitis, this painful complication of gonorrhea, has received much attention at the hands of clincians. The suffering it entails demands relief; its supervention complicates the management of the urethral infection; and, if the testicular malady is bilateral, it is almost certain to deprive the victim of the most exalted privilege of manhood, that of begetting posterity.

The classic treatment consists primarily, in immobilizing the inflamed organ by absolute rest in bed, a suspensory bandage, and compresses. The latter may even contain ice, provided a layer of cotton be interposed between the ice and the scrotum.

For years the writer met the local inflammation by applying to the scrotum a 25 percent solution of silver nitrate. This, it is true, removed the hide, at least a generous layer of epidermis, but the subsidence of the four classic evidences of inflammation was enough to meet the approval of physician as well as patient. The suggestion was at one time made to a student to substitute bismuth subnitrate, mixed with water to a creamy condition, and we found the benefit derived hardly less prompt and decided.

Later on, the addition of that powerful weapon, saturation with calcium sulphide, with its destructive influence over the infective cocci, completed the cure.

It really seemed that the only remaining point to be settled was, whether this perfected treatment would prevent sterility.

Does it do this? Who can tell us? Here is a beautiful opportunity for the application of our favorite method, collective investigation. Many thousands of readers of CLINICAL MEDICINE are adepts in the use of the sulphide calcium. Many have learned to rely upon it in treating gonorrhea. If each one who has done this in cases of double orchitis were to state whether those patients have since become fathers, or could establish a fact that would influence the future of the human race, it would contribute toward a definite answer.

In the French journal, *Le Monde Médical* for June 5, 1913, is given a résumé of recent suggestions:

For the pains, Chauffard uses sodium salicylate, 4 to 5 grains a day; inunctions, three times daily, with a pomade of guaiacol, 5 grains, and petroletum, 30 grains; very hot enemas, suppositories of belladonna or hyoscyamus, or morphine injections. All local urethral treatment must be suspended.

In certain cases one may resort to puncture or incision. Lance advises this for severe forms, in the hyperacute pains and where the general phenomena are intense, for extensive epididymeal indurations in repetitions of acute cases; for old, fibrous, very painful knots. Puncture is harmless and of service in recent cases associated with intense inflammation. It should always be made in very painful cases. Juliusberg advises it for the large nodules of recurrent cases when the patient refuses incision.

The latter may be reserved for grave acute cases with phlegmonous phenomena or when intensely toxic recurrent without urethral reinfection, or old epididymeal lumps that remain very painful.

The general treatment comprises rest in bed, a laxative lactovegetabrian, diet, daily lukewarm baths, the balsams in small doses.

In about fifteen days the patient may be allowed to move about a little, putting on a suspensory bandage before getting out of bed. To favor resorption, iodized inunctions, sitz-baths, massage of the epididymis and cord are in order.

In the April number of *Le Monde Médical* Cruveilhier proposed treatment by subcutaneous injections of Besredka's sensitized vaccine. The result in 14 cases was that the acute pain was influenced so as to permit sleep within twelve to forty-eight hours; and sometimes so radically as to permit return to work; the inflammatory phenomena subsiding correspondingly. By the second or third injection, within a week, no pain was elicited by palpation of the testicle, which had become normal in size and looseness. There may remain a painless lump in the epididymis. A sense of malaise, with fever or chill, followed the injections in four to six hours. Sometimes there was diffuse redness and

tenderness the next day. The injections were made, forty-eight hours apart, in the thigh, abdomen, or back.

We may add that equally satisfactory results in gonorrheal orchitis (as well as in the arthritis and other complications of gonorrhea) have followed the use of the stock gonococcus bacterins, now readily available in this country. Such uniformly good effects follow this treatment that it should be used in every troublesome case—acute in type as well as chronic.

"Hit's no use frettin' w'en things go wrong,
Hit's er whole lot better fer to sing a song;
Jes' take life keerless ez she comes along
An' by-um-by she'll smile!
Den don' cher worry w'en times is tough
An' dar ain't no meat an' de wedder's rough;
Jes' keep a singin' an' yo'll get ernough—
Hit'll come in a li'l while!"

BETTER HOME NURSING NEEDED

Every doctor realizes with what relief he always leaves a seriously sick patient who is attended by a competent trained nurse, knowing full well that his instructions will be carried out to the letter and that she will be vigilant for the slightest sign of danger in the progress of the disease, which, when detected, will be promptly observed and faithfully reported.

But not in all cases, especially those among the great middle classes, and which make up so important a part of the physician's clientele, will the engagement of a trained nurse be practicable. Some patients cannot afford her services, others are not sick enough to make a nurse necessary; and these as well as various other reasons make it certain that one cannot be in attendance in every instance of sickness.

How, now, shall we take care of this great class of patients? The poor are provided for by the State or by charity; indeed, they are much better off in this respect than people of the hard-working, struggling middle class.

It would seem that the only solution to this rather vexing problem is the home-trained nurse; that is, the mother, the wife or other member of the family, properly instructed by the attending physician to take care of the sick person. The mother is the natural nurse of the family, and her degree of proficiency varies, of course, with her intelligence, her sympathy, kindness, firmness, and natural tact. But to these qualities must be added a certain amount of training, if she is to fulfil the demands of modern treatment.

How shall the home nurse be trained? Well, the world of today is a reading world, and much information concerning hygiene and the care of the sick is being acquired through magazines and journals; and doubtless a great deal of positive instruction in home-nursing can be given by means of these channels. Nevertheless, the principal agent of instruction must, after all, be the doctor himself—the family physician. He should teach these home folk how to take temperature, pulse, and respiration; how to examine and report on dejecta and excreta; how properly to feed and bathe patients; even, under circumstances, to use the catheter and the hypodermic syringe. First care to the injured and emergency treatment in poisoning and similar accidents also are appropriate subjects for the instruction of the home-trained nurse.

We are not suggesting, of course, that the home nurse replace or supplant the hospital-trained nurse—no physician who knows the value of the latter would ever think of doing that. However, as stated, there are many, very many instances where the service of the trained nurse is either impossible or unwarranted, in which the doctor is obliged to depend upon the attendance of some member of the family.

On the strength of the maxim, "In time of peace prepare for war," it is a good idea for the family physician to give these home folk instruction in the art of nursing from time to time, as opportunity offers. During a protracted case of confinement is an excellent time to instil information, both as to the routine care of a patient, and also as to what to do in case of emergency.

We repeat that in serious cases the patient should be entrusted only to the hospital-trained nurse; on the other hand, it is our belief that such training of home women would go far toward alleviating the condition of middle-class people, while insuring to the doctor intelligent and efficient assistance where the services of the trained nurse cannot be had.

There need be no fear that such knowledge imparted to the laity will lessen the physician's practice or beget anything like presumptuousness in the person so instructed. It may operate that way in a few individual instances: so it does, occasionally, with the trained nurse. But in the main its effect will be just the reverse. A little insight into the wonderful science of medicine as a rule inspires the layman with just that much the higher respect for the doctor who helps them in distress and forewarns them of danger.

Leading Articles

Bettering The Doctor Himself

By MAYNARD A. AUSTIN, M. D., Anderson, Indiana

EDITORIAL NOTE.—"How Can I Increase My Income?" This is a question which nearly every doctor is asking himself at the present time. There can be no doubt that the tendency as regards the average income of the doctor is downward. Physicians generally are complaining of hard times, and of the difficulty of making ends meet. They are anxious to know how to check this lessening of income. It is to help the man in the field that we have arranged for a series of articles upon this general topic, of which this one by Dr. Anderson, upon "Bettering the Doctor Himself," is the first. As he so clearly points out, the man who desires to earn more must be worth more. The general methods of increasing personal worth we will let Dr. Anderson tell you.

THE author of this article had occasion, a few years ago, to spend several months visiting the physicians in three of the best states of the middle West.

One of the things that surprised him most was the large number of unprogressive practitioners in every town, and the proportion of active and inactive members of the profession was about the same almost everywhere. That is, a city having fifty physicians would have ten making good in professional and financial ways, while of the forty others some would be making a bare living, others not making a living at all, and the rest, if fortunate, were living with their wives' relatives.

In many lines of professional work, a man's personality probably counts for more than it properly should. In law and medicine, results speak for themselves, and personality without ability will ultimately bring its possessor to humiliating defeat. Ability without personality spells success in only a limited degree, while ability with personality and progressiveness will place their possessor in the front rank at all times.

The physician is placed in a peculiar position from the outset of his professional career, in that personality is his sole asset for getting business. All too soon the young physician finds out that much of his time is spent in worrying over minor cases and trivial affairs, and, so, his mind very soon becomes fixed in the idea that nine out of every ten of his patients would recover anyway, even if they had no medical attendant save Dame Nature aided by a little common sense. Furthermore, those of his community who choose to consult him in sickness are, or they soon become, personal friends, and if he is a trustworthy fellow they generally stick to him even when his judgment fails them.

But, this apparent fatalism inevitably brings with it a lessening desire for progress, or, rather, the ninety percent of successes which he has (and with which his help has had little or nothing to do) outweigh his ten percent of flat failures; and, yet, if he would only think the matter over carefully, *it is the dissatisfied patient that always brings the other doctor the most money and business—if the other doctor does succeed.*

It may be a fact, and undoubtedly it is, that not ten in a hundred of our patients require an examination when they consult us. It may be, and undoubtedly it is, a fact that bread pills or sugar of milk or pink pepsin water would cure the same ninety patients. Yet, which of these hundred has a heart lesion, or a trace of albumin or of sugar in the urine, or an undiscovered growth in the abdomen, or a floating kidney, or a latent syphilitic infection, or an incipient case of tuberculosis we do not and can not know until we have made an examination of each of them.

The old rule of consultation free possibly had much to do with starting this neglectful attitude; the patient expected to pay little or nothing for what he got, and he got little or nothing for what he paid. However, a plan that has been followed for a number of years has eliminated this floating class of patients who are looking for information for which they do not want to pay. Their attitude of approach usually betrays them when they come into one's office. They name all the doctors who have examined them and how many things the doctors have found wrong.

But one should never refuse to make an examination for anyone, because it might reveal something unusual and lead to valuable experience later on. If a visitor belongs to this floating class of patients who are looking for free information, we always tell him it will be necessary to make another examination a few days later and what our fee will be when examination is completed. Then, if he really wants to know our opinion, such a one will come back and have the money with him.

Not long ago a woman came to me who said that I was the fifteenth doctor she had had in seven years. She was a most interesting study, taking three, but highly profitable, hours of my time. She was a sociologic problem that surely would have interested Freud, while in addition having several definite conditions demanding direct medical attention. The things I found wrong were of long duration, but had never been discovered—because, forsooth, none of the previous fourteen physicians consulted had ever given her other than a pelvic examination.

It is humiliating to a consultant to find his opinion directly opposite to one expressed by some of his personal friends, and, yet, it is a common occurrence to get a patient whose trouble is found to be entirely different from what someone else has treated him for, but (possibly for a long time) without any kind of examination whatever.

Specific Examples of Medical Superficiality

A series of cases of this nature would be an interesting study, and a few such that have come under my observation of late may serve to illustrate my point.

Patient with stomach trouble and gallstones (?): had lues, associated with visceral crises.

Patient with indigestion and liver trouble (?): had a heart lesion, with passive congestion.

Patient with intestinal trouble and indigestion (?): was a neurotic and had colitis.

Patient with fibroid and hemorrhages (?): had a miscarriage, and got well.

Patient with neuralgia of stomach and constipation (?): had three hundred gallstones.

Patient with nervous prostration (?): had pernicious anemia.

Patient with malaria (?): had no plasmodia in the blood, but was suffering from pyemia.

Patient with typhoid fever (?): had pyelonephritis.

Patient with appendicitis (?): had typhoid fever.

Patient with floating kidney (?): suffered from complete enteroptosis, was a neurasthenic and a weakling—all probably owing to a repressed sexual life.

And what does all this teach us? We should learn that nothing less than the most rigid examination and closest attention should be given every patient who favors us with his call. It may be that the routine of normal urine examinations may become monotonous; but, if we get a case of incipient Bright's disease, and can handle the patient properly, it means that we have added several years to his life expectancy.

Bright's disease is a condition that lasts for years and is considered seriously because only the terminal symptoms and signs are observed by the average physician. Two cases of interstitial nephritis in a family of nephritics have been watched for ten years and these subjects are better now than at any previous time. These two patients have not been "treated" all this time, but they have been watched and advised and had that which was necessary to relieve the kidneys when they showed signs of failing.

The best-paying part of medical work is not dispensing of medicaments, but the cultivation of a high grade of patronage, who are advised to obviate getting sick by keeping in touch with their physician whenever a questionable condition appears.

No special advice can be given to any class of men other than relatively, but there are a number of things that can be said about "bettering the doctor himself" that would make him what the average doctor is not.

Better Remuneration for the Doctor

First in line, I would say that the prevailing fees in the average doctor's practice are insufficient to act as an incentive for him to

do more than listen to the patient himself make a diagnosis of his own trouble, and then to prescribe for what the patient thinks is the matter. It is a little more trouble, of course, to examine the chest or abdomen of a patient who says he wants some medicine for indigestion; still, it is a fact that patients will pay to be told what is not the matter with them, as often as when they are told what the cause of their trouble is.

There are men who apparently are making money out of a twenty-five- and fifty-cent prescription business and dispensing their prescriptions—the same as the twenty-five-cent visit and examination that some life insurance companies ask for. One of the latter's examiners told me recently of making twenty-eight examinations in one day. I asked him what the examination consisted of, and was informed that if the persons could walk and talk they were "passed."

Danger in the Neglected Patient

However, a neglected patient makes more enemies for any physician than a whole dozen satisfied ones can overcome. This twenty-five-cent business, while possibly a necessity in the case of some doctors and some patients, can be eliminated if the doctor possesses ability that is worth a greater fee when he is charging. How? By giving the twenty-five-cent patient a dollar's worth of service at every consultation, and charging him a dollar for it. If an applicant is a worthy patient, but can not pay all that our services are worth, his friendship should be kept, but at the same time giving him to understand that we are helping him because he and his family are worthy of the best care, even if he cannot afford to pay what that care is worth. This class of patients should be charged a dollar for a dollar's worth of work, but whether the account is worth a ledger-page the physician himself is the only one who can decide.

The best reputation a physician can have is not necessarily that which makes him out a good fellow and big-hearted enough to go to see any sick person at any time and any where, but that of being honest enough to give a dollar's worth of service for every dollar charged. If this is known, then the patient with a dollar to spend is going to spend it with the doctor who has been giving a dollar's worth of service for that amount, and not to the doctor who is charging only twenty-five cents for advice and medicine, all told.

Second. Among the causes of poor business and of poor doctors is poor equipment. No matter what the young doctor's financial strain may be or has been, he seems to be fortunate in enjoying unlimited credit. Leastwise the book-agent and many supply-houses assure him of this whenever he needs anything in reason. Much junk often is accumulated by the good buyer, but I know of nothing that does not pay for itself many times over in the usual enthusiasm of trying out new things upon patients, who may receive full value perhaps only from a psychic standpoint.

There are certain things without which no doctor can get along and give his patients full value for what he charges. It may be that a microscope is not used every day, but what it is worth to the doctor himself is even more than its value to the patient. Much of our laboratory work is confirmatory rather than diagnostic—or should be, if it is not that.

The practitioner should be a clinician first, a laboratory-man afterward, and his laboratory need not be very extensive to be of the greatest practical value. A microscope, stains for blood, reagents for urine, stomach and fecal analysis, a blood-pressure apparatus, blood-counting apparatus, and a hemoglobin index are positively necessary. Widal and Wassermann tests and tissue examinations should not be undertaken, though, by anyone having this work to do at infrequent intervals.

Furthermore, a stomach-tube, rectal tube, and catheters should be on hand and in good shape for use at any time. It is true these goods decay when not used (and one may seldom have use for them), but we are being paid to have them when called in an emergency and the instruments are required. The same with a set of Barnes's bags in the obstetric grip, and the catheter for tracheal insufflation. This latter, by the way, may be used as a repositor for a prolapsed cord or a tractor in a breech-presentation at childbirth.

The Neglected Library

The third factor, I would say, is an apparent lack of respect for medical literature—or, rather, a lack of knowledge of how to use it properly.

A few years ago, when medical journalism was not on such a high plane as it is at present, there were a number of journals that enjoyed an unrivaled circulation, because their advertisements permitted these periodicals an unlimited gratuitous circulation. Some of these journals contained much that was of more practical value to the general practitioner of that period of medical education than some of our present, more cultured

periodicals. Still, journals, like other things. may become too familiar, and familiarity breeds contempt; if not that, this familiarity induced a lack of respect that permitted the doctor to get the habit of neglecting his other journals.

We all are familiar with the average doctor's desk—a pile of journals, advertisements, bills, circulars, what not—accumulations of an unknown cycle of years. Some of the journals are marked, as containing articles that are worth keeping, others contain articles that have interest but were laid aside for lack of time or inclination to read them. When time does present itself, inclination happens along, or a given article has a practical value in a present case in hand, the journal containing it is mislaid and seldom found in the disorderly pile.

All this can be obviated by a little systematic daily work. Any journals can be gone through in a very few minutes and then, instead of keeping the whole journal, it should be properly dissected and, after advertisements, and uninteresting, unimportant and otherwise useless pages have been consigned to the waste-paper-basket, a few clippings may be all of interest that the number can add to one's library. These clippings can be filed in a cabinet, in large manilla envelopes, and indexed according either to special, anatomic or pathologic headings. Every physician, of course, will of necessity make his own choice of subject-material, this varying as to his needs or practice.

The use of indexes rerum, scrapbooks, and permanent filing devices are unsuited ordinarily, for the reason that little of the material clipped remains of value for any length of time. One article or reprint may supercede all that has been saved previously to that; and this fact permits of a constantly new reference-library, with no old material to wade through, since the old material is thrown in the waste-basket as soon as it is superceded by the newer, better or more comprehensive articles or monographs.

I wish to say a word about loading one's shelves with books—it is surprising how much junk there is foisted upon physicians, in the shape of new editions and new works that contain possibly not a dozen pages of new material. A friend of mine bought a new book containing, as he was told, much new material on a certain subject over which he happened to be enthused. On looking through his library, we found the subject-matter considered fully in three other of his books, and much better in a recent journal review.

A few periodicals well digested are sure to be several years ahead of any textbook, and the habit of buying many volumes of general medicine or surgery to get a little special information is a waste of money, unless one buys his books for furniture effect. It is not the size of a man's library, but its availability and practicability, that makes it worth while and valuable; and the only way to keep in touch with the newer things is proper utilization of one's journals.

Self-Improvement in General Practice

Fourth in the matter of "bettering the doctor himself" is that which pertains directly to making his work more competent and adds to his skill as a practitioner. Specialists require a prolonged training and make their plans accordingly, but the greatest man in the profession is the conscientious general practitioner whose advice may be sought before a specialist is consulted.

The value of postgraduate work is unquestioned, but the work done by the average practitioner taking a postgraduate course is not that which gives him the most that he can get to benefit him for the time and money he spends. Dr. G takes a special course in the diseases and surgery of the rectum, when he doesn't see one case of piles in a year. Dr. X takes special work in G U, when his patronage does not include many of these unfortunates. Dr. Y takes a course in the diseases of women, watches a dozen vaginal hysterectomies, and ignores a torn perineum. It is not that they are not better off for knowing all that they can learn, *but a man should go after experience in those lines in which his field of work will allow him to broaden himself.*

Obstetrics and obstetric surgery—oh! how many mothers would have been saved lifelong suffering if our colleges had demanded that the *graduates should know how to care for the expectant mother*, and not that they should have made examinations and been present at three or ten or more confinements.

We have been called to use the forceps in cases not even in the first stages of labor—we have been witness to unnecessary tears and infections—we have seen embryotomies and dead mothers, where there should have been successful cesarean sections. If there is one great need in medical teaching, it is a revolution that will make better obstetricians of our graduates in medicine. Two lives are always at stake, and many are the sacrifices.

The general practitioner has his greatest field for advancement at his own door. He neglects his chronic cases, he overlooks complications in his acute cases, he utterly fails in the majority of instances to utilize a wealth of valuable clinical material that comes to him and pays him to do what he pays for the privilege of doing when he takes a post-graduate course.

Every patient should be exhaustively studied, not only as an individual, but as a type and one of a certain family that may show pathologic tendencies or certain physical defects. Making a family-history and keeping case-histories may be monotonous, but their value will pay compound interest many times over in the years to come. More than that: there is one other thing we must not fail to remember, namely, that it is always the patient whom we must treat and please—not a case and a disease.

And, finally, if we are failures in any way, and we have been blaming environment, luck or any other of the commoner misalliances for our defeat, we must stop and think that we can often be what we strive to be, in spite of what may seem an unsurmountable barrier.

Our struggle should always be to better ourselves in the situation we have chosen for our environment, and not to wish for impossible or improbable things. A three-thousand-dollar practice in a village far often is a greater happiness than a ten-thousand-dollar city business. A member of the town council or school board is often as honorable a position as a college professorship. A bit of philosophy often opens to us vistas of green fields that have appeared brown and barren before.

Epictetus tells us: "Remember at any thing that shall befall thee, turn to thyself and seek what faculty thou hast and make use of it—Self-Mastery, Perseverance and Patience should be thy wont."

Diabetes Mellitus: Its Treatment

By W. C. WOLVERTON, M. D., Linton, North Dakota

EDITORIAL NOTE.—Last month Dr. Wolverton gave us, in outline, the modern hypotheses regarding the nature of diabetes mellitus—what causes it and its pathogenesis. This month we have the application of those facts—a careful, clearly thought-out method of treatment built up on scientific lines. Read the two articles together—even if you have to read the first installment over again.

II

[*Continued from page 809.*]

THE treatment of diabetes may be considered under four headings, namely, prophylactic, hygienic, dietetic, and medicinal.

As to prophylaxis: The careful physician who makes a thorough uranalysis a routine procedure in formulating his diagnoses will occasionally find a specimen of urine containing only a trace of glucose. Repeated examinations will show that this is not a constant condition for that individual, and investigation reveals that this transient glycosuria occurs only after the ingestion of an unusually large amount of carbohydrate food. This, then, is not a case of true diabetes, but comes properly under the head of alimentary glycosuria; however, if this condition is allowed to continue, true diabetes is likely to ensue. The remedy is obvious—prophylaxis. Regulate the person's diet, keeping the carbohydrate intake within safe bounds; meanwhile searching diligently for the underlying causative factor.

The hygienic treatment consists in proper exercise and bathing, temperance in eating and drinking, the wearing of clothing suitable to our variable climatic conditions; in short, it consists in right living.

In beginning the treatment of a diabetic subject, one should form a definite idea of the severity attained by the disease. The amount of sugar being excreted should be determined from 24-hour specimens of the urine, using Fehling's solution or the fermentation test.

The next step, in seemingly mild cases or in the absence of acetone and of diacetic acid, is to place the patient upon a carbohydrate-free diet, such as presently will be mentioned. If the case is a severe one or if evidence of acidosis be present, then the patient should gradually be deprived of carbohydrates and cautiously put upon the "diagnostic diet"; this including the following articles:

Fresh meats of all kind, including beef, mutton, pork (except sugar-cured ham), etc., *but not the livers;* game and fowl of all kinds, except their livers; fish and shell-fish of all

kinds, except oysters; fats and oils, including butter, washed cream, and olive-oil; meat- and clam-broths, but made *without flour;* gelatin-jelly, flavored with oil of lemon and citric acid, and sweetened with saccharin; tea and coffee, with washed cream and saccharin; water and carbonated waters (natural or artificially prepared). Sugars and starches, as also all articles of food and drink not specifically mentioned in this list must be avoided.

The foregoing dietary should be continued, with daily uranalyses, until sugar is no longer present, or until it declines no further and it becomes evident that it cannot be made entirely to disappear. In either event, the desired information can usually be obtained within a week, or often within three or four days.

With the disappearance of the glycosuria or its reduction to a minimum, a piece of bread $2 \times 3 \times \frac{1}{2}$ inches should be added to the dietary three times daily for three days, at the same time making daily uranalyses. At the end of this three-day period, the amount of bread should be gradually increased for each succeeding three-day period, with continuation of the daily uranalyses, until sugar reappears in the urine (or until its amount begins to increase, if it never had entirely disappeared under the "diagnostic diet"); that is to say, until the limit of glycolytic capacity (ability to metabolize sugar) has been reached.

List of Foods Permitted to Diabetics

In the *mild* cases, the subjects are now placed upon a "moderate routine diet," this including the following list: Fresh, salt, and cured meats of all kinds, including beef, corned beef, dried beef, tongue, mutton, pork, sausage, ham, bacon, salt pork, tripe, etc., except sugar-cured meats and the livers; game and fowl of all kinds, except their livers; fresh and cured fish and shell-fish of all kind, except oysters; fats and oils of all kind, including butter, cream, olive-oil, peanut-butter, etc.; broths, and meat, vegetable, and cream soups of all kind, but without starchy thickening or sugar; gelatin- and Irish-moss jellies, flavored with fruit-juices or acid wine and sweetened with saccharin; eggs in every form, except as omelet containing flour; milk, buttermilk, soured milk, fermented milk, cheese of all kind; fresh vegetables, including spinach, cabbage, cauliflower, Brussels sprouts, onions, soft green corn, mushrooms, celery, radishes, lettuce, cucumbers, pickles, chow-chow, watercress, tomatoes, etc.; acid fruits, such as lemons, apples, cherries, gooseberries, currants, etc.; tea, coffee, water, carbonated and saline waters; brandy and whisky, in proper quantities, if required; cream and saccharin may be used.

To the proper amounts of the foregoing, add, three times a day, a piece of bread or toast, the amount to be specifically prescribed. For the bread or toast, there may be substituted, in whole or in part, potatoes, rice, oatmeal, cereals, but only as directed. Sugar in every form must be avoided. Starches, except as specifically mentioned, and all foods not mentioned in this list, must be avoided. The quantity of bread consumed should be just as little below the glycolytic capacity of the patient as safety will allow.

The 24-hour urine should now be examined once a month.

In "*borderline*" cases, in which the severe type of the disease is approached, it is well to put the patient one day of each week upon the "strict routine diet"; to wit:

Fresh meats of all kind, except the livers; game and fowl of all kind, except their livers; fish and shell-fish of all kind, except oysters; fats, including bone-marrow, oils, butter, washed cream, etc.; cheese, buttermilk, soured milk, curds, fermented milk (*no sweet milk);* broths and soups made from meat, heavy cream or vegetables, but without starchy thickening; gelatin-jelly, flavored with lemon-juice and sweetened with saccharin; eggs in every form, except as omelet with flour; nuts of all kind, except chestnuts and peanuts; fresh vegetables, including spinach, cabbage, cauliflower, Brussels sprouts, stringbeans, tomatoes, young onions, asparagus tips, celery tops, lettuce, watercress, dandelion "greens," cucumbers dill-pickles, etc.; acid fruits, including lemons, limes, apples, cherries; olives; such liquids as tea, coffee, water, carbonated and saline waters; whisky and brandy, if required. For sweetening, saccharin is to be used; heavy cream is permissible. Starches and sugar in every form must be avoided, as also all foods not specifically mentioned.

This list does not exclude every form of carbohydrate; still, it is as strict a diet as can be continued for any considerable length of time by the diabetic.

The Caloric Factor in the Diet

In the *severe* cases, the "strict routine diet" must be followed; but not infrequently it is necessary to add particular foods, including a certain amount of carbohydrate, in order

to avoid toxic acidosis. In these severe cases, the caloric requirements of the patient must be estimated, and the quantities of the various foods definitely specified, in order that the food ingested may meet the tissue requirements of the patient.

Here it is especially necessary to push the fats to the limit of the patient's ability to assimilate them; and because of their high caloric value they are especially valuable in replacing the taboo carbohydrates. Here, too, alcohol many times finds a useful place, as it it said to be particularly valuable in facilitating the metabolism of fats.

In calculating the caloric needs of a diabetic, it must be remembered that a sufficient excess of food must be consumed to offset the loss of glucose through the urine. Otherwise there will be a metabolic deficit, which nature will make up by a destruction of the patient's bodily tissues.

This "excess feeding" is to be determined by calculating the caloric equivalent of the glucose lost in each 24-pour period, as shown by a quantitative sugar estimation. In doing this, allow 18.2 calories per pound of the patient's body-weight. In the estimation of the caloric value of various foods, *Rubner's factors* are these: 1 Gram of protein yields 4.1 calories; 1 Gram. of fat, 9.3 calories; 1 Gram of carbohydrate, 4.1 calories.

Get Atwater's statistics of the caloric value of the various foodstuffs; they can be obtained from the Department of Agriculture, the charge being 10 cents.

Exceptions and Modifications

In severe cases of diabetes, it is wise, and often absolutely necessary, to relax at times the stringency of the dietary and to allow a reasonable amount of carbohydrate food. This precautionary measure goes far toward preventing acidemia and consequent coma; and it is imperatively demanded upon the appearance of the premonitory symptoms of acidosis, such as dizziness and headache. Whenever diacetic acid is found to be present in the urine, with or without evidence of impending coma, sugar must be added to the diet, and sodium bicarbonate administered in large amount (2 to 3 ounces daily), either by mouth, enema or by intravenous injection, as the exigencies of the situation may demand.

It seems to have been demonstrated—and it is well to bear this fact in mind—that the greater the amount of proteid diet, with absence of carbohydrates, and the greater the amount of fats ingested, the more acetone will appear in the urine; while the greater the amount of carbohydrates ingested, the less acetone will be found in the urine.

As regards the matter of substitutes for bread, a few remarks made upon the subject of "gluten flours" are called for. It is possible to make, commercially, a flour composed largely of gluten, and such flours may be procured; but the article is of low caloric value, is unpalatable, and the patient soon tires of it. Nearly all of the gluten flours, so called by their sponsors, are fraudulent, containing, as they do, large proportions (35 to 50 percent, or even more) of starch.

Bread, biscuits, and so on, made from almond-meal from which the sugar has been removed may be tried, but the patient soon tires of these substitutes. Potatoes, well boiled, often will enable the patient to do without bread; they contain only 8 percent of starch, and may sometimes be allowed when all other starches are withheld, unless glycosuria persists. There is a "flour" made from edible pine-nuts (Chicago "sanitary flour"), which contains 7 percent of carbohydrate, in the form of cane-sugar; if raised with yeast, most of the sugar is decomposed, until only about 1 percent is left. This flour makes a very palatable, edible bread.

Sometimes in mild, and even in some severe cases, the patient will tolerate small quantities of levulose and lactose, and he may receive these in the form of sweet fruit, fresh milk, and so on. Trial is the only means of judging of their usefulness in the individual instance. Saccharin should be employed for sweetening foods and drinks; but it must be remembered that it is offensively sweet, and is least objectionable when used in exceedingly minute quantities. Saccharin may be procured in tablets of 1-4, 1-2, and 1 grain each, respectively.

In the severe cases of diabetes, that is, those in which the patients do not become sugar-free on a fat-protein diet, an unusually difficult problem is presented. These patients elaborate sugar from the carbohydrate portion of the protein molecule, so that in some instances as much as 80 percent of the ingested proteid is converted into sugar, while even the body-proteids may be attacked. Such patients at times may show an intolerance for proteid equal to that for the carbohydrate, according to Naunyn, so that for them a restriction of proteid food becomes an essential part of the treatment.

For these individuals, the range of dietary, therefore, becomes greatly restricted, and the closest watch must be kept for signs of

dangerous acidosis; and though we should persist to the limit of prudence to render the urine sugar-free, this must not be done at the risk of producing coma or too marked undernutrition. The greatest judgment must be exercised under these circumstances; still, with care and patience one may often have the satisfaction of seeing a severe case assume a mild or moderately severe form. To render these patients sugar-free, starvation days, fat-vegetable days, or at times oatmeal days, or a series of these in conjunction may be resorted to.

In those severe cases in which the patient craves milk but cannot tolerate it because of the lactose it contains, "Williamson's milk" will be found a good substitute. Prepare as follows: Shake thoroughly 4 ounces of fresh cream with 1 pint of water, then set aside for two or three hours; then skim off the cream. Now add the white of 2 eggs, beaten up in 8 ounces of water, to the cream; add salt and saccharin (or levulose) according to taste.

Reason for Restricting Carbohydrates

The object of the restriction or exclusion of carbohydrates from the diabetic's dietary is, that it obviates the losing of sugar on his part, while, through the substitution of fat, he is supplied with a material that, owing to the special character of his perverted metabolic functions, he cannot so easily squander. It is only in the most severe cases that a loss of sugar accompanies such a diet, and then only to a slight degree.

The diabetic "recovers his balance," gains strength, for he now receives a diet of which he can dispose physiologically; while before, under an unrestricted or incompletely restricted diet, with consequent excessive sugar production, he dissipated and lost the greater part of its nutritional value.

It is of the greatest importance to keep the urine of a diabetic subject free from sugar. It is a fact, proven by the experience of competent observers, that the danger of complications may be remarkably minimized if it is possible to keep the urine entirely sugar-free. It is not the final small loss of sugar with which we are concerned, but the problem is, *reduction of the hyperglycemia.*

As a general rule, the slighter the attack and the greater the hope of eventual recovery, through the avoidance of unnecessary irritation of the controlling factors, the stricter should be the dietary regulations. On the other hand, more latitude must be allowed when the condition is severe, in order to avoid the incidence of acidemia. But even here it is well at first to try to render the patient aglycosuric by the gradual exclusion of carbohydrates and a reduction in proteins, and the employment of the "oatmeal cure." In this way, even the severely affected may be converted into a milder type, and a certain tolerance for carbohydrates is built up.

In the severe cases, a weekly "fast-day," or "rest-day," is a valuable adjunct measure. On these days, the patient rests quietly in bed, taking only weak tea or maybe a little whisky or brandy. Almost all diabetics will become aglycosuric following these fast-days. There should also be "vegetable-days," when only vegetables, plus some bacon, butter, and perhaps a few eggs (or, better, the vegetable protein, glidine), are eaten.

In regard to the socalled "oatmeal cure," von Noorden, its originator, has laid down certain rules, which must be closely followed if beneficial results are to be expected. First of all, an important preliminary is, to reduce the glycosuria as much as possible by previously diminishing the intake of food very markedly.

A few "vegetable-days" frequently are sufficient; but often it is necessary, in addition, to let a "fast-day" precede the "oatmeal cure." Then oatmeal is given (say, an ounce daily, at first) for not to exceed three days. A "fast-" or a "vegetable-"day should follow the oatmeal-days. Then the oatmeal should be given anew, when it will usually be found that a considerable tolerance to this food has been established. The "oatmeal cure" should be reserved for the more severe cases, and it must not be followed continuously, but periods of not more than three days each are to be interposed between other periods of strict diet.

The Medicinal Treatment

The great stress laid upon the dietetic treatment of diabetes has crowded medicinal remedies into the background, especially since we have no real specific for this disease; nevertheless, there can be no doubt that drugs, when properly used in conjunction with systematic dietary restrictions, do produce favorable results, in some instances symptomatic cures continuing for many years being accomplished.

The one drug above all others which has long maintained a reputation for usefulness in this condition is *opium*, or *codeine* as its favorite alkaloid. There can be no doubt regarding the benefit which some patients at

times derive from codeine: thirst and hunger are relieved, polyuria and glycosuria decline, sleep is improved, strength and weight are augmented; albeit, increased constipation and lessening of the appetite are the price paid for those benefits.

To be effective, codeine must not be given until proper dieting has reduced the glycosuria to about 20 Grams in the day; then give from 1 3-4 to 2 1-4 grains daily, in divided doses. The glycosuria disappears entirely. If the glycosuria disappears or is materially diminished, or else if no impression has been made after a reasonable length of time, the codeine should be reduced or suspended, as the case may be. This alkaloid is a remedy which should be reserved for the severer cases; in the mild ones it is not needed.

Von Noorden has found *aspirin* very effective in reducing the glycosuria, but cautions against its use if nephritis be present. He considers this drug second in value only to codeine. Begin with 10 grains three times a day, and increase the dose to 15 grains, carefully watching for toxic symptoms.

Arsenic has long held a place in the treatment of diabetes. The preparation almost universally recommended is the bromide of arsenic, in the form of Clemens' solution, and has thus been recommended by such men as Tyson, French, Flint, and Potter. The dose of the solution (Clemens') is 3 to 5 minims, once or twice daily. Fowler's solution of potassium arsenite has also been widely used; it is recommended that it be given in small doses over a long period of time, rather than to try for the physiologic effect at once. Barclay's new arsenic preparation, liquor arsenii compositus, should be of great value in these cases.

Iodine, that protean remedy, must not be forgotten in treating the malady we are considering. Lorand, of Carlsbad, tells, in a recent issue of the *Journal des Practiciens*, how he has used it in diabetes of the aged with surprising results. His first case was that of a man of sixty years who had marked arteriosclerosis, which condition induced Lorand to prescribe iodine. To his surprise and pleasure, the sugar disappeared from the urine of the patient.

Shortly afterward Lorand had a woman of fifty-five years who had a resistant asthma in addition to her diabetes. To meet this asthma, Lorand tried iodine, and again the sugar percentage notably diminished. In a third case, he tried iodine again, although there was no prominent symptom save the excess of sugar in the urine, and was again rewarded by excellent results as to the diabetes.

This experienced French therapeutist is inclined to the belief that iodine has some specific influence upon the arterial circulation of the pancreas, and advises his colleagues to try the familiar drug in all cases of diabetes in the aged.

Rudisch (*J. A. M. A.*, Oct. 23, 1909), finds that *atropine* has a more marked influence upon sugar excretion than any of the drugs he has hitherto tried. With it, the glycosuria disappears much more rapidly than with a carbohydrate-free diet alone; and when, with cautious increase in carbohydrates in patients whose urine has become sugar-free, sugar reappears, it is often possible to suppress the sugar solely by atropine without reducing the carbohydrates.

Of the sulphate of atropine, his initial dose was 1-150 grain three times a day; and this was gradually increased, in some cases, up to 1-20 grain three times a day. Often a third of the maximum dose accomplished all that could be desired. Rudisch found that the methyl-bromide of atropine was better tolerated than was the sulphate, and that an initial dose of 1-8 grain t. i. d., could safely be increased by 1-16 grain at a time until 1-2 grain was being taken t. i. d.

Uranium nitrate has been used with success by a number of observers. It is to be administered in doses of 1-2 to 2 grains, t. i. d. "Merck's Manual" places the dose at 3 to 8 grains, cautiously increased to 15 grains, two or three times daily, after meals. This drug, like aspirin, must not be used in the presence of nephritis. A. G. Hopkins (Burlington, Iowa) declares that, to all intents and purposes, he has effected a cure in three unmistakable cases of diabetes, by the use of this remedy, in combination with jambul. He recommends:

Uranii nitratis	(dr. 1 to)	drs 2
Fl. ext. jambul seminis	(fl. dr. 1 to)	fl. drs. 2
Glycerini		ozs. 2
Aquæ dest., q. s. ad		fl. ozs. 4

M.; ft. sol. Sig.: fl. dr., p. c., t. i. d.

S. G. Soules, in *The Medical Record*, states that fluid extract of chimaphylla, 2 drams in a glass of milk t. i. d., caused the complete disappearance of glycosuria after twenty-three days of treatment. After the glycosuria disappears, then he recommends adding arsenic to the treatment. Of course, dietary restriction is essential to the success of the treatment. The active-principle practitioner will doubtless think, ot once, of chimaphiloid.

Hare recommends *jambul*, in doses of 5 to 30 grains of the powdered drug, or 1-2 to 2 drams of the fluid extract. He asserts that the best results are obtained when used in connection with an exclusive meat diet.

Another practitioner, Faulds, asserts that he has employed with success, in 15 out of 16 cases of diabetes, an infusion of *eucalyptus flowers*, using 4 drams of the drug to 6 ounces of water. One such draught is to be taken twice daily. He claims that oil of eucalyptus or eucalyptol will not produce the same results as the infusion of eucalyptus flowers.

Antipyrin, in full dosage, is of undoubted value in many instances, reducing glycosuria and polyuria.

Waugh writes that he obtained his best results from *strontium lactate*, 20 grains t. i. d. One of his "cures" remained aglycosuric for five years, under only slightly restricted diet.

Remedies for Special Symptoms

Coming now to the treatment of individual symptoms: Sodium salicylate is said to be the best single remedy for the *pruritus;* it is given in dose of 1-2 dram t. i. d. The itching parts should be bathed frequently with hot water and soap; then a solution of thiosulphate (hyposulphite) of sodium, 1-2 dram to the quart, is to be applied. A dusting powder consisting of orthoform, 10 percent in talcum is of value. But above all things, in diabetic pruritus, endeavor to reduce the glycosuria.

For *anorexia*, give strychnine, perhaps best in the form of the triple arsenates of iron, quinine and strychnine. Dilute hydrochloric or phosphoric acids, largely diluted with water, are indicated in excessive thirst.

Constipation is best relieved by laxative saline waters; the artificial preparations answering quite as well as the natural ones. A saturated solution of magnesium sulphate may be prepared, dilute phosphoric acid and saccharin added, and oil of cinnamon to flavor. In this way a nauseous drug may be made fairly palatable. There are, however, palatable effervescent preparations available, which answer every purpose, and are always to be found in a well-conducted pharmacy.

Sulphocarbolates are indicated in *intestinal fermentation and putrefaction*. Here also should be tried cultures of the Bulgarian lactic-acid bacilli—a reliable culture can be obtained under the trade name of galactenzyme.

For *boils and carbuncles*, calcium sulphide is of undoubted value; inoculations of stock bacterins containing staphylococci and streptococci should be injected subcutaneously.

When *acetone and diacetic acid* begin to appear in large quantities in the urine (warnings of impending coma), large amounts of sodium bicarbonate are imperatively demanded; as much as 2 or 3 ounces of the drug must be given in the twenty-four hours. *Give sugar*. Administer whisky or brandy freely. Keep the bowels active.

In the presence of actual *coma*, bleed to the extent of 24 to 32 ounces, and replace, by intravenous infusion, with an equal amount of a 2-percent solution of sodium bicarbonate in physiologic salt solution. Give a stronger solution per rectum, by the Murphy drip-method; also by mouth, if the patient can swallow. If the patient recovers, the diet for the first week should contain carbohydrates, the quantity of sugar in the urine being disregarded. After that, however, he must return to his formerly special diet.

A Prayer

By LOUIS UNTERMEYER

God, though this life is but a wraith,
  Although we know not what we use,
Although we grope, with little faith,
  Give me the heart to fight—and lose.

Ever in conflict let me be;
  Make me more daring than devout;
From sleek contentment keep me free,
  And fill me with a buoyant doubt.

Open my eyes to visions girt
  With beauty, and with wonder lit;
But let me always see the dirt
  And all that spawn and die in it.

Open my eyes to music; let
  Me thrill with spring's first flutes and drums;
But never let me dare forget
  The bitter ballads of the slums.

From compromise and things half done
  Keep me, though all the world deride,
And when at last the fight is won,
  God, keep me still unsatisfied.

—*From the Butterfly.*

Neurasthenia: Its Relation to Drug and Liquor Habits

By FRANK FENWICK YOUNG, B. S., M. D., Covington, Louisiana

Founder and Physician in Chief of the Fenwick Sanitarium

NEURASTHENIA, or nerve weakness or nerve prostration, which is so prevalent in America today, stands at the top of all functional neuroses; but it is rarely recognized in its early stages and only comes under observation when it has reached such profound degree of nervous instability as to render the sufferer unfit for the ordinary occupations of life. It is a condition in which the nerve- and brain-cells are in a state of pathological fatigue and unable for any length of time to perform their functions with any degree of unison and harmony.

We know that in the physiological fatigue of the brain and the spinal nerve-cells there is shrinkage of the protoplasm and a contraction of the nucleus, and if the degree of fatigue be great the latter sometimes even lose their shape entirely and become irregular in form.

In neurasthenia, we have a continuation of this condition. In other words, it is a normal condition of the nerve-cells in a chronic neurasthenic, and as such we find the brain-cells are incapable of properly receiving impressions, incapable of properly holding or elaborating impressions, and consequently, incapable of properly sending expressions. As a result, ideation and cerebration are relatively inefficient and sometimes totally wrong. If this is the condition of the higher cerebral centers, it is easy to surmise the deplorable state of the lower centers that control the various functions of the body. They have suffered in like manner and are, besides, more or less dependent upon the higher centers for proper performance of their functions.

This is the condition of the brain-cells existing in profoundly neurasthenic brains. Unfortunately, and only too truly, neurasthenia exists in various degrees; it usually requires quite a length of time for the cells to reach that profound degree of exhaustion just described.

Understanding the process by which this condition is brought about, it can readily be seen why it requires the length of time it does to develop. Every normal individual with a normal brain and nervous system has systematically during his previous life-experiences accumulated a certain amount of nerve-energy, a surplus amount of which has been stored away in certain portions of the brain, and this is termed the "normal reserve." The purpose of this reserve that nature, in its perfection, has seen fit to supply is manifold.

The brain nourishes and manufactures nerve-force, or nerve-energy, during sleep *only*, and in persons leading a regular life that amount is usually sufficient to meet the demands of the ordinary day's routine. It converts[1] nerve-energy continually during the working-hours, consequently there is a certain amount of nerve-energy manufactured as well as converted during every twenty-four hours.

Now, then, there always exists a certain ratio between the daily amount produced and the daily amount converted or transformed. In times of excessive brain-work, great sorrow or shock, or of any severe strain where there is naturally a greater conversion than the amount produced, it is the purpose of the "normal reserve" at once to supply this deficiency and for cerebration and ideation to go on to a successful conclusion without any interruption or exhaustion whatever.

It is clear, if the ratio between the daily production and daily conversion is entirely lost and the latter as a daily routine exceeds the former, that sooner or later the "normal reserve" will be entirely exhausted, becoming a thing of the past and no longer to be reckoned with. When this happens, we have the daily conversion far in excess of production, with no reserve whatever to supply the deficiency. Then, as a result, what have you? Why, inevitably a daily cellular exhaustion, with an arrest or greatly deficient ideation and cerebration, with resultant instability and failure. In other words, the entire mass of cerebral cells goes to pieces in a vain and fruitless endeavor to continue functioning.

Picture to yourself this condition and apply it to such cases as you have seen time and time again. Could anything be more

[1]Energy is never lost or consumed, but always converted into a something else, in other words, energy always produces.

clear? The individual feels the exhaustion, is more or less cognizant of the cerebral weakness, the nervous unrest, the morbid fears, the nervous instability, with the long chain of symptoms. Surely, this is a familiar picture to many physicians.

The lack of power of concentration is one of the earliest symptoms of neurasthenia. The extreme fatigue, out of all proportion to the amount of exertion, is also another early symptom. The receptiveness and unrest of the nervous system, coupled with the irritability and lack of confidence, occur as later manifestations.

What Causes Nerve Exhaustion?

As to the causes of this condition, they are very evident: the conversion of a greater amount of nerve-energy than normal, and the failure of a production of an equal amount, with a final overdraft of the "normal reserve."

I maintain that no legitimate or fair amount of excessive brain-work will alone bring about that condition. No matter how severe or arduous it may seem, the brain is capable of a great and vast amount of work and fatigue, this is almost limitless, provided there is sufficient sleep and rest, including distraction, to allow replenishment and recuperation. Under these conditions, I say, no amount of work can break down or exhaust a normal and hardy nervous system.

Twelve or fourteen hours of severe and arduous brain-work, in connection with eight or ten hours of good, normal, refreshing sleep and rest, is fully compatible with a strong, vigorous and perfectly stable nervous system. No amount of work under these conditions can wreck it. I may differ with others in this view, but I believe I am correct.

On the other hand, take twelve or fourteen hours of hard and arduous brain-work, and, instead of the appropriate amount of restful sleep and recreation, let the greater part of that time be taken up in excesses of any kind, and the nerve-cells will be deprived of that amount of rest and recuperation that is essential; and time soon will tell the tale, for a breakdown and exhaustion of the centers is sure to follow.

Neurasthenic heredity plays an important part in the production of neurasthenia. The children of neurotic parents, the children of alcoholic or drug-addicted parents nearly all inherit weakened nervous systems. This state, however, when recognized, can be corrected by a systematic hardening through certain methods in handling the growing child. But if, as ordinarily in the majority of children of such parentage, this is not done and they grow up to maturity with their inherited weakness, then what is the result? In their very first struggle in life, they go down to exhaustion and defeat and join the vast army of neurasthenics as a "monument to their ancestors." The percentage of those who are scientifically treated and restored to their former condition of usefulness and health is very small, indeed, and this because either not being properly recognized or treated.

Unfortunately, few physicians, indeed, recognize neurasthenia in all its stages, and fewer are they that treat it scientifically and persistently and obtain anything like the desired results.

Many men today whom I can point out as failures in the world, men who have all the necessary qualities of training and education, and all else that goes to make successful men, but, nevertheless, who are failures and never attain the position which their qualities entitle them to, are so for the sole and simple reason that they are neurotics or neurasthenics. They seem incapable of concentration and stability necessary to success.

The Role of Alcohol and Narcotics

Neurasthenia is a direct cause of alcoholism as well as of the various drug addictions. The nervous unrest and the nervous teasings that continually haunt the individual who is a profound sufferer of neurasthenia, that condition of the exhaustion of the whole cerebral cellular mass, call for relief, but the vast majority seek relief of their own accord, and during their greatest suffering of nerve teasing and unrest they seek a stimulant of some kind, usually some form of alcohol.

What is the result? The temporary stimulation does bring them relief; and so they go on seeking continuous stimulation, not, indeed, because they want it, not because they desire it, but because they crave relief from a something that they cannot explain—something there is that worries them. In other words, these sufferers seek relief from their tormenting nerve teasings or nerve unrest, the result of the exhaustion of the brain-cells. Thus they go on seeking by this artificial means the fugitive relief until at last they become addicted to whatever stimulant they have chosen, be it liquor or some drug.

Does this expedient furnish renewed energy for the exhausted cells to carry on their work? Does it take the place of the "normal reserve"? Not at all! It does neither. The narcotic, of whatever form, only ob-

tunds the higher centers of consciousness and reason to the real condition that exists. The exhausted cells are the same as before, or even worse, and the highest centers, which have become very sensitive under the strain, are obtunded or are no longer cognizant of the weakness and exhaustion that exists. Then the individual reasons conclusively that he is relieved, when, as a matter of fact, it is not relief at all; it is only obliviousness of the existing condition. Still, to the victim oblivion means relief.

How clearly, then, is seen the pathway from neurasthenia to addiction of some kind. And I boldly say that by far the largest percentage of the many and various addictions reach that sphere through the neurasthenia-route.

Curative Efforts

In curing these victims of addiction, you nearly always have the original neurasthenia that leads to the addiction to overcome at the same time that you are seeking to combat that also which is due to and the result of the addiction. In other words, you have to meet a double condition in your patient.

The treatment and successful management of these victims by no means is an easy task. The first essential is absolute and perfect knowledge of the disease. Any physician who looks upon neurasthenia as a lack of "will-power" or as "akin" to hysteria, because of its functional disorder, should not attempt to treat neurasthenic individuals. This should be left to the men who *know* and understand thoroughly and appreciate the exhaustion that exists in the cells of the nervous system.

To reestablish the daily ratio of the proper amount of nerve-energy, to meet the demand of ordinary circumstances, and in time to replenish, in part or in full, the original "normal reserve," should be our aim in treating every case of neurasthenia. But, to reestablish these conditions anew, to give back to that individual that perfect self-control and poise and absolute stability that have deserted him, I say, is no easy task. And on the part of the physician it requires time, patience and a knowledge that comes only with the experience of handling these cases.

The more specialized the tissue, the slower it is to repair. Consequently, in building up and repairing exhausted brain-cells, the length of time required is only in keeping with a well-known physiological law. I believe that there are more neurasthenics who go *untreated* in America than those afflicted with any other disease; and it is time that the medical profession give this condition more of their time and study and become better prepared to handle that vast army of neurasthenics, as they should be, by proper and scientific methods.

The Sanitarium the Only Place

The proper handling and treating of these cases belong to sanitariums, as proper institutional treatment is the only one that gives results. Hypochondriasis, so often seen, is always due to neurasthenia. Each of you can see a number of such cases you tried hard to benefit, but from whom you got absolutely no results. You became desperate, the patient likewise. Not your fault; for the best doctors in the world could not handle these cases satisfactorily at their homes. These patients belong properly to sanitariums, and they should be sent there as quickly as possible prior to their becoming addicts of some kind, which will almost surely happen. Therefore, we find neurasthenia and drug- and liquor-addictions closely allied.

Up till now, where have the patients gone for treatment—for they will surely seek it? They have been the prey and rich harvest of quacks, whose "ads" many of the socalled strictly ethical journals carry—places that have no resemblance to a sanitarium and are nothing more nor less than common boarding-houses, where everybody is treated alike; true "merry-go-rounds."

Here, I may refer my readers to *Collier's* of September 22, 1906, for a good exposure of these sharks, and, also, to the *Critic and Guide*. These two publications deserve much commendation for their good work in exposing such frauds, and the medical profession owes it to them. Few journals, indeed, have done anything to throw the searchlight on these numerous charlatans.

Who is responsible for these unfortunate victims having gone to the human sharks? Why, the legitimate medical profession is solely responsible! Many physicians know almost nothing about neurasthenia and its vast chain of symptoms, much less of drug- or liquor-addictions, and when they do, they cannot cure them at their homes; or, even if they do know, they take no interest in advising them where to go. Hence, these people are left to their own selection, and the glowing glib-tounged promises from fakers catch them.

My Own System of Treatment

The treatment to be any way satisfactory in these cases as stated, must be institutional.

The means which I employ are: (1) Drug medication. (2) Electrotherapy. (3) Hydrotherapy. (4) Mechanotherapy. (5) Psychotherapy.

Regarding the first, I will say, that there are only a few drugs that can be employed intelligently and with satisfaction. I saw an article, written sometime ago by a physician, claiming to have a sanitarium, who gave as the most valuable drug in the handling of neurasthenics phosphate of codeine. This drug and all of its family should not be used under any circumstances. And I will state that during my experience, extending over a period of sixteen years with these special cases, during which time I have handled hundreds, I have been particularly careful to use nothing akin to this drug-group, for all neurasthenics will take to any form of opium like a duck to water.

A few words here regarding the "great three-days hyoscine cure" is not amiss. For ten years I used it and studied its effects upon unfortunates coming under this head—upon well persons and upon lower animals, and am thoroughly convinced it has no place, or only a very slight one, in the armamentarium of specialists handling drug- and liquor-patients. Dozens are being killed each year by this "hyoscine treatment," and others are ruined for life. Quite well do I agree with Dr. Shoemaker, the great author and therapeutist of Philadelphia, that when a person is once intoxicated with hyoscine it requires years for the nervous system to get over the shock, if he ever does.

The article written by Dr. Lambert, of New York, vaunting the Townsend "gunshot combination or prescription" method, was not based upon a sufficient number of cases with observation sufficient long after the socalled cure to warrant serious consideration by the profession. Yet, this article was copied broadcast by so many medical journals. Why? All serious-thinking and truly competent and scientific physicians in this line of work know there was nothing of weight or merit, much less new, in the Lambert article. All drug and liquor cases should be under observation for at least four or five years after treatment before any responsible report can be given on them. Whatever drug is being used, let it be the active principle, if possible, for these are the most reliable. Dr. Patterson's article on "Don'ts" in CLINICAL MEDICINE was good and to the point.

Under the second heading comes electrotherapy; the divisions of which are static electricity, the electric-light cabinet, and the sinusoidal and galvanic electric baths, all of which aid us considerably.

Under the third heading comes hydrotherapy, one of the most valuable assets and includes the vapor, shower, douche, neutral, saline, and various other baths; any of which when needed and properly used gives admirable results.

The fourth, which is serviceable is mechanotherapy. From this branch we have physical culture in its various forms; in other words a complete and modern gymnasium in the hands of a well-instructed master of this art. When this is done, the benefit to all neurasthenics is incalculable.

The fifth, and by no means the least, is mental or psychotherapy; by which we mean suggestive therapeutics. Under this caption come the various forms and methods of verbal proposals, instructions, advice and rules which when used by the experienced neurologist yield flattering results.

In conclusion, I will say, that all drug- and liquor-addicts, when they enter an institution, are neurasthenics, as has already been proven in this article, and the first step in the treatment of this class is to free them from stimulant, be it drug or be it liquor, whichever the unfortunate is using. (Some enter institutions taking as much as 180 grains of morphine and 120 grains of cocaine; others as much as one-half to one gallon of whisky in twenty-four hours.) This is easily done in from three to sixteen days, with little inconvenience to the patient, without danger or shock, and virtually without any suffering whatever, when they are in the hands of one who knows his work.

After the patient is freed from the addiction, the regular institutional treatment is essential, which, when properly carried out, always accomplishes the end; otherwise they are sent home neurasthenics still and will inevitably return to drug or liquor. The results obtained in from four to ten weeks are almost incredible—must be seen to be realized.

Therefore let it be distinctly understood that when a patient is off of drugs or liquor he by no means is cured; he is only put in the proper condition for a cure. In other words, then, the neurasthenia, the cause of all the trouble, is there, and it is up to the physician to cure the patient of this; and in every instance it can be done, unless you have some unfortunate degenerate, which is rare. I am firmly convinced that all cases of neurasthenia, if properly handled, are curable, unless they are of the above-named type.

Some Accuracies of Practice

The Correlation of Some Precise Methods of Diagnosis and Treatment

By B. G. R. WILLIAMS, M. D., Paris, Illinois

Author of Williams' "Laboratory Manual"

EDITORIAL NOTE.—At our suggestion, Dr. Williams has supplemented the articles which he has written upon diagnosis, and which have appeared from time to time in these pages, with a series telling how to make therapeutic application of that diagnostic knowledge. For instance, if too much urine is excreted, you not only want to know the "why," but, also, "what shall be done?" If there is too little urea, you want someone to explain what to do to set matters right. Dr. Williams is giving us this help—and, frankly, the professional staff of CLINICAL MEDICINE *will try to help him. This series of articles is unique, and, we think, will prove very helpful.*

DR. HARVEY WILEY is telling us how to raise our babies; Mrs. Rorer is rapidly solving problems in physiology that have baffled the research-workers for centuries; Mister Pitcairn has straightened up the vaccination-question, showing up Jenner as a simpleton; Caruso is instructing our daughters in what they shall wear; Ella Wheeler Wilcox, onceuponatime writerine *cum laudibus*, has shamed the surgeon. The professional man has been defined as one who must know something about everything and everything about something. Lo, here! Hearken to another of the profesh—Williams is to write concerning therapeutics!

Diagnosis and therapeutics are closely associated. He who practices medicine, even though he limit this practice to diagnosis, must specialize in therapeutics. While he may not actually prescribe or dispense, he ever must keep in mind the practical diagnosis, which, after all, is the diagnosis suggesting precise therapeutic measures.

The disease is sciatica; but why exhibit salicylates (specific), when the urine is full of pus? The patient complains of headache; but why confine the treatment to the coal-tar series (symptomatic), when the sputum contains tubercle bacilli?

The therapeutic hints which I am about to record are not only those accepted today by our leading practitioners as best, but those which, in many instances, I have seen tested—usually by colleagues—following the information supplied by the chemical, microscopical, or bacteriological aids. Long ago, when I limited my practice to diagnostic work, it came to me that I must practice therapeutics with a vengeance.

This series of papers has been written for you, the enthusiastic practitioner, not for the therapeutic nihilist. His is the disposition to scoff from chairs of ease; yours, the duty and the privilege of saving the life of your patient. Let us dispose of the pseudo-scientific grandstander as did Elisha Bartlett many years ago: "When crowds of epauletted and bedizened coxcombs who have never smelt gunpowder make the air clamorous with their noisy boastings, the war-worn and scar-covered veteran may, at least, point to the trophies that he has brought from a hundred battlefields."

A destructive policy will always fail. A constructive campaign may be based upon wrong premises, and may, apparently, fail; but will lead to better things in a nearer future. And, so, we are exploring a new Cathay. Many of the paths, though of gold, are not yet trampled smooth. Tomorrow will witness perfection; but meanwhile let us look about us.

Several years ago I suggested that the truly valuable uranalyses are not those designed to discover casts, blood, and pus, those which diagnosticate disease often in its incurable stage; but for the minor products of abnormal metabolism and excretion—proof of disturbed function and its nature in certain organs and systems while remedial measures may yet avail.

The Quantity of Urine Voided—Polyuria

Passed is the day when physicians approach the analysis of a single voiding of urine, expecting to find considerable information that may be of value. It is worse than useless to attempt quantitative examinations when the 24-hours' amount is unknown; but of this I shall have something to say later. The amount of urine voided daily, irrespective of other findings, is not without a thera-

peutic significance. No comment is necessary concerning the many influences that may affect the urinary output; and this especially applies to the temporary variations. However, persistent polyurias and oligurias demand attention.

Some Causes of Polyuria

A polyuria, when marked and persistent, can not always be dismissed as a condition of no importance. Especially is this true when the polyuria becomes also a nocturia, that is, when the condition is more marked during the night. Such a finding very often directs the attention to the heart, and the practitioner should not be surprised to find some enlargement indicative of compensatory hypertrophy, but especially of dilatation. Whether the cardiac insufficiency obviously present exists as a primary (valvular) condition or merely as a result of arterial hypertension, is, of course, to be determined in the case at hand and indications accordingly met with digitalin or glonoin, respectively, or even with other agents designed eventually to help out this overworked organ.

I shall show later that in some forms of cardiac insufficiency there may be a decrease of urine. The lesson to be emphasized is: *Persistent polyuria or oliguria should invariably direct attention to the heart as one of the possible causes.* Several times in my work attention has been drawn to hypertension by polyuria when the advisability of blood-pressure determinations had not yet been suggested.

It may be remarked that frequently polyuria does not require direct treatment; for polyuria, even though persistent, may arise from so many causes working in various combinations that often we have no good reason to believe that it is strictly pathological, but, like certain other symptoms, may be regarded as one of our body defenses.

The paroxysmal polyurias as a rule are of vasomotor origin, and are more likely to indicate functional than organic brain or cord lesions. We may frankly confess that many times we are at a loss to interpret the meaning of all these paroxysmal polyurias. Nevertheless, they may of themselves become exceedingly annoying to the patient; in which contingency they generally may be relieved by the administration of the valerates with ergotoid—of the latter, 30 minims by mouth, three to five times a day for short periods.

Diabetes mellitus supplies our most vexing cases of polyuria. And, yet, if we can but reduce the glucose in the urine, invariably the total daily urine is reduced; and, so, the polyuria cannot well be treated without "going after" the sugar.

Diabetes insipidus, a disease concerning which much has been written, but of which few cases are seen (at least this is my experience), demands treatment aimed at the polyuria. Such treatment usually fails. I have seen a suggestion in the recent literature, and this I am repeating.

It has become very much of a fad to find a Wassermann reaction in almost every disease for which a cause has not been previously proven. Thus, Neuberg has obtained a positive reaction in a case of Banti's disease, and suggests a syphilitic origin for some of these cases. Another man has found the Wassermann reaction in scarlatinal nephritis, and concludes that hereditary syphilis certainly is necessary for this complication to ensue. There are plenty of other similar instances.

But now Benario reports the finding of a positive Wassermann reaction in seven cases of diabetes insipidus, and suggests cerebral syphilis as a cause. He, furthermore, claims cure of certain of these subjects under specific treatment. I am inclined, however, to call attention to the frequency of syphilitic nephritis associated with polyuria, and am not willing to accept Benario's deductions without question. We have found that syphilitic nephritis by no means is an uncommon condition. Anyhow, do not forget protoiodide of mercury and arsenous iodide in the baffling polyurias.

Strauss has assumed that true diabetes insipidus is not a very serious condition, after all, and seemingly suggests that much may be done by training the patient to drink less water. I have found that 24-hour calculations, in several of these cases of diabetes insipidus, revealed, not a true polyuria, but, rather, frequent voidings of urine in irritable bladder. Treatment of this would lead us into a study of symptomatics.

Entirely foreign to the intention of this article is the question of test-polyuria, where large amounts of water are administered experimentally, in order to test the ability of the renal parenchyma to pass it on as urine.

Oliguria, or Scanty Urination

Persistent oliguria may usually be regarded as a very important condition, and especially is this true where the urinary solids are high or normal. It is not unreasonable to suppose that serious damage to the kidneys is likely when the urine is overconcentrated.

The diagnosis of persistent oliguria will rest upon many factors, but it seems to me that the voiding of anything below 22 fluid ounces daily (in some instances more than this) should be regarded as a case of oliguria. When day after day the amount of urine rarely exceeds 24 ounces, we have good reason to assume that it is too concentrated. The cause may be evident (fever, diarrhea, etc.); but ordinarily we shall find it just as necessary to treat the oliguria as to treat the cause of it.

Treatment of Oliguria

Drinking much water may, sometimes, aid. But, do not say to the patient, "Drink plenty of water," for very often after such advice the water will suddenly become offensive to the patient and, for some unknown reason, may drink less than if left uninstructed. It is much better to exhibit medicines in large amounts of water at frequent intervals; and in this manner water prescribing is truly realized.

Under certain circumstances, small doses of diuretin given along with the water will aid in flushing out the kidneys. In desperate cases, salines introduced by rectum appear to aid. I use the term "desperate" advisedly: a pint of urine of 1042 specific gravity passed each twenty-four hours, day after day, may be regarded as a circumstance quite as serious as a hemoptysis or a Dietl's crisis—less startling, to be sure, but more likely to be death-dealing eventually.

In other communications, I have shown how by persistent urinary concentration painful oxaluria may result; and I shall have more to say concerning the treatment of this condition further on.

Shall we undertake to treat the oliguria associated with certain of the nephritides, especially those of the epithelial type? I do not know. Our knowledge in respect to this is not yet perfect. Is it better to overcome the concentrated urine, or to place a greater strain upon the kidneys by inciting them to secrete more water? In an existing nephritis water usually is given, but I believe that better results are secured when we combine with this treatment a call for aid upon the other emunctories, besides the kidney.

Even as polyuria many times is associated with cardiac insufficiency, so also may oliguria be present in distressed heart. These are invariably the cases associated with a low arterial tension, so that, when the cardiac area and signs are suggestive, treatment should be directed especially at the heart musculature. Give digitalin.

Another remedy that undoubtedly is of great value in these cases of scanty urination is sparteine sulphate, which is a gentle and almost nontoxic cardiac tonic and a potent diuretic. By adults, from 1-2 to 1 grain may be taken every two or three hours; children in proportion.

Closely associated are the liver-cases wherein urobilinogenuria, sometimes even albuminuria is associated. Here the urinary output is persistently low and cannot always be explained by an ascites collecting but may mean at least hindrance to return of blood through the liver to the right heart (venous hypertension and consequent renal engorgement). Almost invariably there is an oliguria associated with urobilinogenuria.

Anuria, or complete absence of urine, for several days is always a condition of considerable importance, notwithstanding the contradictory statements in many texts. That anuria may persist for a considerable period without uremia, I will not gainsay, for we all have witnessed this condition; but how unexpectedly convulsions and fatal coma may suddenly appear, can be realized only by one who has seen such an occurrence. The kidney has for its purpose the secretion of urine; let this purpose be thwarted, and the condition may at any time quickly pass beyond the action of remedial measures.

Let me repeat; anuria always is a serious occurrence. Even though the patient jokes with you and laughs at your painstaking; even though the texts tell you that Dr. So-and-So reported a case where the patient recovered after a two weeks' anuria, do not fail to resort to the use of hot-packs, pilocarpine and elaterin.

It has been claimed that anuria cannot be held responsible for the symptoms of uremia.

Perhaps not; but of the nature of uremia we know very little, and clinical experience teaches me that the conditions are very closely associated. Do not underrate anuria.

Physical Qualities of the Urine

Appearance.—I shall not spend much time upon the macroscopic appearance of the urine—appearances are deceiving. Better subject the specimen to thorough chemical and microscopic tests before initiating treatment. Much time could be devoted to a description of the appearance of the urine; but for our purposes it is well (and certainly safer) to proceed to other considerations.

A dying man may pass urine that appears entirely normal, while a person in excellent

health may void an "awful looking mess" (amorphous urates). The physician should acquaint himself with the macroscopic appearances of the urine, as given in standard texts; but must place little emphasis upon them.

Cloudy urine must be filtered before applying the chemical tests; neglect to do this has led to many false conclusions.

A little piece of paper,
A funnel made of glass
Will hold back all the crystals
And let the liquid pass.

Color.—A word about the color may not be amiss. Naturally enough, when we are dealing with normal urinary pigments, the color varies directly with the concentration. Thus, I have come to express the color as: colorless, brassy, and copper. And this answers very well for ordinary practical purposes.

When pathological colorations are absent, we may form a fairly good idea as to the concentration and, indeed, as to the 24-hour amount by observing the color; although this is not satsifactory in the question of exact calculations of solid constituents. When speaking of urochrome and urobilinogen, I shall have something further to say concerning the normal urinary pigments.

Black urine is said to indicate some melanotic neoplasm, but this is not so in routine work. Usually a black coloration either in the fresh urine or later in the standing sample, will be found owing to an alkaptonuria or to the excretion of other aromatic derivatives, either medicaments or broken-down proteids. No special treatment is demanded so far as the condition itself is concerned. The problem is, to get at the cause.

The green and golden urines of bilirubinuria will be considered later.

The red urine may mean a deeply copper-colored urine (concentration or increase of normal pigments), or may mean blood, uric acid, and other things, the question to be decided by chemistry or microscopy.

The methylene-blue urines demand no special elucidation.

Odor.—Therapeutic agents are quite likely to cause a urinary odor; but "smells from the urinal" rarely give us a tip as to what therapeutic agents to employ. Indeed, we are justified in adding to a urine to be mailed, for examination, thymol, camphor, and chloroform, and various aromatic bodies, without fear of subtracting from the value of the examination.

If a freshly voided urine is strongly ammoniacal, alkaline cystitis probably should be diagnosed. We do not treat the odor, but rather the causes and other accompaniments, the agents being, for instance, hexamethylenamin, diacid sodium phosphate or other urinary acidifier, and proper surgical treatment, such as irrigations.

A sweet odor suggests glucose, and especially acetone. Test for them and treat accordingly.

A fecal odor does not always indicate colicystitis or colipyelitis, but it should suggest this diagnosis. A fecal odor may mean fecal fistula. It may mean the presence of a secondary cystitis (stone or tumor) where hydrogen sulphide is released by germs.

The Chemical Reaction of Urine

As a rule, I shall not detail the technic of using the various tests. To this part of laboratory work I have devoted a book, so that a repetition scarcely is called for. Neither can this series delve deeply into the problems of physiological and pathological chemistry. Certain of the more recently devised tests will be detailed, and a few remarks made here and there regarding the principles underlying the various tests, so that the practitioner may comprehend just why a certain line of treatment is advised.

Normal urinary acidity does not arise from the presence of free acids, but from certain acid salts, especially diacid sodium phosphate. The mixed 24-hour specimen of urine normally is acid. Folin seems to have shown that free organic acids, in traces, may contribute to the urinary acidity even in health; but for practical purposes these may be ignored. So much for the normal acidity of the urine.

We constantly see the statement that normal urine sometimes is alkaline; and actual tests with litmus seem to bear out this statement. However, most workers have discarded the use of litmus as an indicator, and employ instead an alcoholic solution of phenolphthalein. Experience has shown me that when using this reagent practically all strictly normal urines exhibit an acid reaction (24-hour specimens being utilized.)

Many influences contribute to urinary hyperacidity; but these may be classified under one general head, "erroneous metabolism," either of the body cells, or secondary, by virtue of the presence of certain microbes. Thus, we have the true acidemia of Harrower, in which the acids are produced in the bowel by excessive and faulty putrefaction of pro-

teid foodstuffs through the action of certain bacteria (intestinal intoxication). In a like manner, I have, upon several occasions, called attention to an acidemia where the body-proteins were broken down in a similar manner, and in consequence the urinary acidity may be increased in such conditions as pus formation, malignant neoplasms, and so on.

Then there are the acidoses of sugar-diabetes and of other conditions where carbohydrate starvation exists, and concerning which we shall have more to say under acetone and its congeners. Certain local infections of the urinary tract, notably those owing to the colon and tubercle bacilli, may cause hyperacid urines (scalding urines). Finally, we have now and then to deal with unknown causes of increased urinary acidity, those obviously metabolic in character, but an exact classification of which is elusive. Thus, certain of the oxalurias and uricacidurias (uric acid does not, of itself, contribute to the acidity) fall into this class and will be considered in another communication.

Acidity of the Urine

When casting about for a method of estimating the urinary acidity, our attention is directed first to the titration method of Folin; which is the most accurate of all, inasmuch as the use of potassium oxalate prevents dissociation of the ammonium compounds. However, for practical purposes, this need not be considered an advantage, but rather is an objection, inasmuch as the very presence of these ammonium compounds shows us that much of the acid elaborated in faulty metabolism is thus hidden, and it is this very acid for which we wish to test.

So it is that I regard the method of Harrower, while open to objections, to be preferable and certainly much more simple; and this is the one which will be described here.

The method using this special instrument is, as explained by Dr. Harrower himself, as follows:

"The acidimeter which I have designed consists of a glass tube so graduated that 10 Cc. is the first measureing point. From this upward the tube is graduated in fifths of a degree to 100°, each degree representing the amount of decinormal sodium hydroxide solution required to neutralize 100 Cc. of urine. The method of using the acidimeter is as follows:

"The urine to be tested is poured into the tube until the lower edge of the meniscus is just on the 10-Cc. mark. Two drops of phenolphthalein indicator solution are added, and then, with an ordinary medicine dropper, decinormal sodium-hydroxide solution is slowly added, inverting the tube after each addition, until the color of the fluid has just been changed from a yellow to a light-rose pink. The acidity in degrees is now read off on the tube at the level of the fluid. The normal urinary acidity of a mixed 24-hour specimen should be between 30 and 40 degrees." Total acidity 35,000 to 45,000 units.

Since the urinary acidity varies from hour to hour during the day, an estimation, to be of value, must be made from a sample taken from a mixed 24-hour specimen. One other caution is necessary; namely, the estimation must be made as quickly as possible, else errors will result because of the acid or alkaline fermentations occurring in the urinal. A non-acid preservative (chloroform or xylene) always should be added to the vessel in which the urine is collected.

Copremic Acidemia

Let us turn our attention briefly to the acidemia of copremia. In certain persons, as a result of constipation, the excessive ingestion of proteids, enteroptosis or of various other causes, certain bacteria in the colon attack the proteid foodstuffs, breaking them up into organic acids and other decomposition-products, and these are absorbed and appear, at least in part, in the urine. We do not know the composition of all of these substances. One of them is indolacetic acid; certain ones of them are acids containing sulphur (in some cases, sulphuric acid?). In certain bacterial decompositions of proteids, hydrocyanic acid has been detected; and it is not unreasonable to suppose that such may occur in traces here. Certain of these substances are the true indicans.

But it is known that these bodies are poisonous; and it has been assumed that their presence may explain the headache, vertigo, blues, and other nervous symptoms associated with copremia. Furthermore, it is fairly evident that during the elimination of these acids the renal parenchyma may suffer injury; and thus it is not unusual to find in such a urine traces of albumin and hyaline casts. The ammonia of such a urine may be increased at the expense of the urea, because the alkaline precursors have united in part with these poisonous acids, that the fixed alkalis of the tissues may be spared. In such contingency, the total nitrogen may

be unaltered but the urea low, findings similar to those of true acidosis of carbohydrate starvation.

This, in brief, is the picture in the acidemia of copremia.

Now, before proceeding to the consideration of the other causes for hyperacid urine, let us look into the treatment of this condition that is so important in the everyday practice of most of us.

There is an old caution, "Examine the urine in every case of persistent headache;" but reference was meant, of course, to the possibility of the existence of nephritis. Now we follow the same advice, but we also look into the question of acidity.

The man who hopes to treat intestinal acidemia by a course of alkalis alone will occupy a position similar to that of the boy who tried to drink up the water from the leaking dam. The man who hopes to accomplish noteworthy results by the administration of a single cathartic will be but little better off. Both of these methods are not without value, but there are other principles which must be carried out if any degree of success is expected.

As a whole, the treatment of copremic acidemia may be expressed categorically as follows:

1. Reduction of the proteid diet
2. Eliminating the focus of the intoxication.
3. Administration of antacids.

Obviously, the main problem will lie in eliminating the focus of infection. But how?

A preliminary cathartic is necessary; and, since we are dealing with the colon, this, obviously must be a saline. Then must follow a course of laxative treatment (alkaline salines), to insure a strict house-cleaning in this natural incubator. This may be coupled with the proper use of intestinal antiseptics. We know that intestinal antiseptics will not murder every erring germ; neither do we expect such a result. Even Lister did not hope to eliminate every single microbe when he proposed surgical asepsis. Nevertheless, we can do much in this direction.

What next? Now let us cease giving the antiseptics, but continue the laxative treatment—we are ready to introduce a well-behaved germ. Metchnikoff and others have directed our attention to the bacillus bulgaricus (galactenzyme); and this, it may be ventured, will act almost as a specific when backed by proper attention to the other principles of treatment.

Of antacids, there is no lack; but one of the best for the treatment of these cases of acidemia, following the intestinal cleaning-out already recommended, is the mixture known as sodoxylin. Very decidedly beneficial results often follow its employment.

Now and then this line of treatment will fail or must be continued indefinitely, excellent though it has proven in the majority of cases. What is the trouble? Examination will reveal that an enteroptosis or other anatomical condition exists favoring stasis; and here we must call upon the surgeon to help us out. But *as a rule* these cases may be successfully handled by medicinal and dietetic treatment alone.

In previous communications, I have insisted that a similar acidemia may exist by virtue of necrotic changes in the tissues. The findings in the urine are similar to those detailed above. The breaking up of body-fats may add the fatty acids; still, the picture is not unlike that seen in the colonic acidemia. The blood examination may reveal an iodophilia (to be considered in a later chapter). Thus, in necrotic tumors, abscesses, pulmonary tuberculosis, and so on, we may have a true excretion of poisonous proteid-decomposition-products by way of the urine.

At times we may wonder why proper attention to the colon does not clear up an acidemia. Billings and others have shown that hidden suppurative processes, though of a low grade, may lead to nephritis and arthritis, and they have directed our attention to the tonsils and other anatomical regions. And thus to an antacid treatment should be added the use of proper bacterins or even operative interference.

The question is a big one. I have expressed my belief, in other articles, that a man may have the toothache in the big toe; and that I have seen instances in which the removal of a decaying tooth or the proper draining of a frontal sinus was followed by a return of the urine to normal acidity and simultaneous disappearance of headache and dyspepsia.

The diagnostician often will be perplexed by the occurrence of highly acid urine and indicanuria, *but let him keep in mind that such conditions always are pathological.*

As to Acidosis

Quite different in nature from acidemia, is *acidosis*. We do not understand this condition quite as well as we should like to; yet, it

seems at this time certain principles may be laid down.

In diabetes mellitus, as the patient grows worse, we shall find his urine increasing in acidity and his blood decreasing in alkalinity. We shall find the urea low; and this usually may be traced to an increased ammonia (precursor), the attempt being made by nature to neutralize the acids, so that the fixed alkalis of the tissues may be spared.

What are these acids and acid-like bodies? Betaoxybutyric acid and diacetic acid may be given places of honor: perhaps there are others. Closely associated, we may find acetone. In fact, acetone has been charged with a share in postanesthetic vomiting, vomiting of appendicitis (including all injuries to the peritoneum); and I have found acetone in the vomiting of pregnancy. Does it occur in tuberculosis and other diseases?

In diabetes we have to treat the glucosuria as well as to administer antacids, and so on. It has been suggested by Frew that acetonuria associated with postanesthetic vomiting is caused by carbohydrate starvation, and that it can be relieved but not prevented by the use of alkalis.

Guthrie has advocated the administration of nutrient enemata up to within two hours of the operation. Frew suggests that these should contain available carbohydrates, best dextrose, that its absorption and assimilation may be rapid. (Do not confuse with the treatment of glucosuria or hyperglycemia, which will be detailed later. The principles are much different. In the former, carbohydrate starvation arises from dietetic errors, and the tissues are willing to use the simple sugars. Forced to fall back upon proteids instead, acetonuria results. But in diabetes the tissues cannot use the sugars, even though these be supplied in the simple forms.)

Hyperacidity Owing to Colon and Tuberculosis Germs

Next we have to deal with hyperacidity of the urine resulting from the presence of the tubercle and colon germs. There is a temptation to dismiss this condition with a recommendation that treatment be directed to the causative microorganisms; and this may suffice in part in the case of the colon bacillus, where pus is almost invariably present to aid in the diagnosis. But what of Koch's bacillus?

Hyperacidity of the urine may be present, in a case of tuberculous pyelitis, for many months before pus, albumin, and blood or other pathological products are found. Let us be on the lookout for these cases. These bacilli show a tendency to compensate for any alkaline treatment aimed at their metabolism. Also, remember that hexamethylenamine is most potent as a urinary antiseptic when the urine is acid.

I might venture that the acid urines of the colon and tubercle infections are, of all, the most difficult to neutralize; and this should be regarded as a point of weight in the diagnosis. Very large doses of alkalis must be given, as much as a dozen Grams of potassium citrate daily to a child of two having colon pyelitis, according to some authorities. Yet, this treatment will be best in the long run; for the colon bacillus can compensate only to a certain point, and then, forced to live in an alkaline medium, will quickly perish. Perhaps we could accomplish more in renal phthisis were we to push alkalis, frequently testing the urine, to be certain that we were accomplishing what we had set about to do.

Finally, perverted metabolism may supply hyperacid urines which elude classification. The urines of the socalled uricacidemias and of the clinical oxalurias are very often excessively acid; but of this we shall have more to say under uric and oxalic acids.

Unclassified Metabolic Perversions

I have stated that the normal urine (24-hour mixed specimen, examined when fresh) rarely is alkaline, as tested with phenolphthalein. A persistently alkaline urine (properly tested) may usually be regarded as a pathological condition.

First of all we may well consider alkaline cystitis and its treatment so far as the alkalinity is concerned. This being caused by fermentation, which in turn comes from conditions principally surgical, treatment must be surgical. But certain cases, for various reasons, cannot be operated, and there are medical indications bound to rise. One of these, hyperalkalinity, favors precipitation of salts and the consequent formation of calcareous deposits and perhaps other complications.

I have advised the use of benzoic acid, in the past, when dealing with these conditions and have seen fairly good results at times. But recall that the *normal urinary acidity is not owing to free acids*, but to certain acid salts, notably diacid sodium phosphate. advising the use of this salt; but have found it difficult to secure from pharmaceutical And, so, in some of these cases I have been houses. I have seen excellent results in one

patient, a few grains apparently relieving ammoniacal strangury.

I am confident that the administration of that substance, providing the normal urinary acidity, will eventually prove of most value, being, as it is, the only rational method of treating hyperalkalinity. [Jordan, in *The British Medical Journal*, finds both the benzoates and acid sodium phosphate of value to acidulate alkaline urine.—Ed.]

An ammoniacal alkalinity is a volatile alkalinity; i. e. the urine upon standing if the fermentation be retarded, loses its alkalinity, the ammonia escaping. A volatile alkalinity is invariably persistent. A fixed alkalinity is more likely to be temporary and represents an increased excretion of fixed alkalies from some exudate or extravasation being absorbed or when alkalies are being administered as medicaments. Such urine, while not strictly normal to the routine of the cell community, cannot be regarded as pathological of itself and demands no therapeutic consideration, although, continued to excess, it may lead to calcareous deposits.

In the hypochlorhydrias and upon certain diets, examination of a single specimen of urine may lead us to diagnosticate fixed alkalinity; but I should prefer to investigate the 24-hour specimen, since that is quite likely to show an acid reaction.

Specific Gravity and Total Solids

A specific-gravity reading may suggest, but never "cinch," a diagnosis. A very large amount of a day's urine of a tremendously high specific gravity suggests diabetes; but in at least one instance I have seen a diagnosis thus made turn out to be incorrect. In obvious nephritis, a small quantity of urine having high specific gravity suggests epithelial involvement, whereas considerable urine of a low specific gravity suggests implication of the fibrous structure. Here again the 24-hour specimen is to be tested, because the specific gravity varies considerably during the day.

No absolute standard can be fixed for health. The texts have repeated the 1020 figure through the ages, and it hits the truth fairly well when the individual passes about 48 ounces (or 3 pints) of urine daily. But let this person go upon a water spree or a beer debauch, and what happens? In proportion as the total of the urine ascends, so does specific gravity descend; or, the inverse happens if the urine is decreased in amount. Temperature changes operate in a similar way. When a cold wave appears, the 24-hour urine generally can be collected in a quart bottle.

Remember that we have in mind a person in excellent health. In disease, we have many influences coming in, so that I may risk the statement that the specific gravity rarely suggests definite lines of treatment. I have referred to the high specific gravity of concentrated urine and outlined a rational therapeutic procedure.

Of considerably greater importance is the question of total solids. Known the daily urine and its specific gravity, it is quite easy, by means of certain coefficients, to make this determination approximate, at least. Thus if we multiply the last two figures of the specific gravity by 1.1 and in turn mutiply the result by the number of fluid ounces of the urine voided daily, we have the total solids expressed in grains. Of course, this method is not accurate. Still, for that matter, the more complicated methods are not without sources of error; and this simple calculation ordinarily will prove the preferable one. If now we divide the result by 15, the total solids present will be expresses in Grams.

The normal individual upon a mixed diet excretes by the kidney-route something over 60 Grams of solids daily; variations must be almost spectacular to attract much attention upon the part of the diagnostician. Certain it is, however, when the total solids fall below 30 Grams or soar above 75 Grams such readings cannot be regarded as normal. In the first case it is well to remember that urea alone usually runs over 32 Grams, with a diet containing plenty of proteids, while, in the second instance, the kidneys have thrust upon them more work than should be expected of them.

When subsequent calculations of the various salts brings out the fact that all the solids are present in decreased amounts, even though the diet cannot be held to account for an explanation, we must look about us to ascertain, if possible, the cause for this condition.

Sometimes this cause may not be obvious; now and then a general "metabolic sluggishness" may furnish the explanation. In certain instances, diseases of the nervous system seem to play a part. Attention has been called to the very small amount of solids in athyrea; and I have been on the lookout for such conditions. I can recall one case in particular where persistent low solids gave the hint, and small doses of thyroid extract cured a patient who had gone the rounds. Most of the consultants had suggested a neurosis. This taught me a lesson, which was

emphasized somewhat later in a similar case, showing that the diagnosis of athyrea as a rule is missed by the average medical man.

Empirically, eupurpuroid has been recommended for low solids. Another remedy which should be tried more, to increase the content of solids in the urine, is boldine. This alkaloid is especially valuable when the patient's urine contains little urea in association with relatively high total solids.

The total solids may soar high, but usually this may be explained by the increase of but one or several of the urinary constituents. It is up to the practitioner to determine which of these is excessive before planning a treatment.

Dr. William Goodhue: The Lepers' Friend

An Appreciation, by His Brother

By E. S. GOODHUE, M. D., LL. D., Holualoa, Hawaii

FOR more than ten years the subject of this sketch has lived among the lepers of Molokai, giving his best efforts in time, study, and hard professional work for the amelioration of those pitiable, hopeless victims of a foul malady. Coming there when conveniences and equipment were inadequate, Dr. Goodhue has suggested and aided one improvement after another, until at present the colony is better fitted, probably, for its great needs than any other leper-institution in the world. This is saying very much, but the statement cannot be questioned.

Here are the various "homes," in the shape of substantial structures, the hospitals, churches, stores, schools, together with all necessary administration-buildings, besides an ideal operating-hospital for the surgical work done at his biweekly clinics by the surgeon-in-chief. This clinic Dr. Goodhue established several years ago, after having demonstrated that surgery was one of the most valuable of the available measures in the treatment of leprosy; and, in his hand, it has grown to be a feature of the institution.

In an article printed in *The Williamsport* (Pennsylvania) *Grit* for February 7, 1909, we find this statement:

Opinions of Some Famous Men

"Dr. Goodhue has carefully tried all remedial and therapeutic agencies that have come to him with any recommendation, carefully noting and recording results, and has thereby made substantial contributions to medical knowledge . . . . On another phase of the treatment of the disease, Dr. Goodhue's views are thus expressed by himself: 'Leprosy is a surgical disease. That is to say, the various surgical procedures adapted to the relief and cure of pathological lesions constantly and necessarily associated with leprosy are of infinitely more service to the leper in the relief of pain and discomfort, preventing fevers, restoring active use of hands and feet, and prolonging life, thus proving of more real benefit to the leper than all the therapeutic measures of our present-day methods of internal treatment.' "

Dr. Robert Koch, the famous physician and scientist of Germany, who visited this leper-settlement a few years ago, said: "Dr. Goodhue's work here is surprising and extraordinary. I call his one of the great clinics of the world. With unassuming gentleness and modesty he is doing a work not only for Molokai but for the world." These words are not those of an enthusiast, but were uttered by a man of conservative spirit.

Many other distinguished physicians as well as literary men have written of this great work in terms of highest appreciation, but none of all this praise has in the least affected the simple modesty of this physician-philanthropist, who is inherently averse to publicity and who has ever discouraged anything that is not directly concerned with the betterment of his people.

The Lincoln of the Lepers

The late Nicholas Senn, under whose teachings Doctor Goodhue received his surgical training, once referred to this pupil as "the Lincoln of the lepers." And, indeed, this likeness to Abraham Lincoln has been observed and spoken of by others. As a result of this man's unselfish sacrifice of himself, his willingness to meet the wants of any of the lepers day or night, his deep and sympathetic interest in the history of each one under his care, as well as the success he has met with in relieving so many of physical

suffering, all of his people are attached to him with a deep, unfeigned affection. Their love is shown in many ways; and this he appreciates, but always receives it with a characteristic protest.

Once he was asked to accept some policital honor, but he declined, saying, with a smile, "If you make a politician of me, who then will be your doctor?" The matter was never referred to again. So, also, when in 1909 he was appointed a special delegate from Hawaii to the International Conference on Leprosy held at Bergen, Norway, he declined. It has been the same with offers of honorary memberships, degrees, and numerous other marks of appreciation. The evidences of kindliness which prompted the people he has deeply appreciated, but he did not care for any rewards.

Doctor Goodhue has not written any account of his work among the lepers, except those reports that are required biennially by the Hawaiian Legislature. Every mention of his work at Molokai that has appeared in public print or otherwise has been due to the interest felt by his numerous friends, but even to whom he has been consistently reticent regarding his work. Said one traveler of him: "I never saw a man so absolutely devoid of selfish ambition and love of praise." But in his reports he has taken pains to mention others who have been associated with him in his work, and even to exaggerate, perhaps, the importance of their help.

With the Roman Catholic fathers, he is on terms of deep friendship, although a Unitarian himself; and, like Lincoln, he has worked, not for religion's sake, but for the love of the brotherhood of man. He has devoted his spare time to his laboratory, where in 1905 he discovered the bacillus of leprosy in the mosquito and the bedbug, and at the request of the priests made, at the time, a report of the bearing of this discovery upon the spread of leprosy in Hawaii. In this report, he speaks of the assistance of Father James, now in Paris, while he also has often referred in a kindly way to "Father" Dutton, whose picturesque attitude toward lepers and Molokai has been widely advertised.

How much larger and more humane Doctor Goodhue's work has turned out than that so simply outlined editorially by a medical journal issued in his (that-time) home-town in 1900! Said *The Southern California Practitioner* for September, 1902, in referring to the recent assignment:

"Doctor Goodhue has been appointed medical superintendent of the Molokai Leper-Settlement. He is thirty-two years of age, a graduate of Rush Medical College, Chicago, 1897. He goes to Molokai for special work for the Government. The light-cure (x-rays) will be thoroughly investigated, as well as other curative measures. It is the intention of the superintendent thoroughly to investigate the cause of leprosy and, in connection with this, if possible, to discover what part the mosquito plays in the propagation of leprosy. The field is large, and the scientific world will watch the work of this new devotee with interest. . . . . May God bless him and all mankind in his work!"

Since his incumbency, the superintendent has prepared for the Hawaiian Board of Health the following reports of his work: "Alterant and Eliminant Remedies in Leprosy;" "Scabies Among Lepers;" "Some Clinical Observations in the Leper-Settlement;" "Treatment of Leprosy."

The latest and most important result of his work is embodied in a report just issued by the Board of Health, and is an account of a positive cure of leprosy by surgical measures.

After reviewing the results, in his hands, of the local and systematic treatment of leprosy, Doctor Goodhue says:

"P. was declared a leper, in 1906, by the Examining Board for Lepers, after the usual careful clinical examination, in conjunction with the report of the official bacteriologist. Entered the Settlement, Molokai, October, 1906. . . . . Operation was a radical dissection of the tissues involved. . . . . For conservative reasons, I have purposely avoided reporting the above case until a sufficient length of time had elapsed to place the result beyond the shadow of a doubt or the possibility of recurrence. Eight months after outlined operation, patient, brought before the official examining board, presented no physical blemishes, and rigid bacteriological tests were neutral. The patient was declared nonleprous, discharged from the Leper-Settlement, and is now leading a useful life as a road-overseer on the island of Maui.

"However absurd the statement may appear to those not thoroughly familiar with every phase of the disease, I boldly assert that, in the unsuspectedly large number of incipient cases where the disease is localized, these or any other treatments which remove the then circumscribed area or focus of infection, without opening channels for metastatic dissemination, will cure in six to twelve months' time."

This revolutionizes the whole subject, explains the puzzling incubatory period and

the mysteries of immunity and nonimmunity, and, best of all, holds out hope and cure for the victim of leprosy. Surely, reward enough for a decade of assiduous study and unselfish association with lepers in all stages of the disease.

"No other man," says one writer, "has done what he has. No one has been willing to expose himself to the disease as he does day by day, careful only so far as such care does not interfere with the greatest good of his patient; assiduous, painstaking, gentle, yes, loving in his attitude, sleepless often, for the sake of his charge. Never was there a nobler work done than is being done by Doctor Goodhue of Molokai; never has there been such unselfish, unheralded work, a work unknown except to those who come here to find it out. No pose nor religious devoteeism with which exaltation so many pass into lives of self-sacrifice. If Doctor Grenfell's work has been great, Doctor Goodhue's is equally so; and the results of his work are for the healing of the nations."

Doctor William Goodhue was born at Arthabaskaville, Province of Quebec, Canada, October 8, 1869, his parents being James Goodhue and Mariam Emerson, both Americans of old New England families. He was educated at home and in the public schools

DR. WILLIAM GOODHUE

of Rochester, N. Y., whither he was sent. Removing with his parents, in 1884, to Riverside, California, he took, later, a business course in Los Angeles; but was persuaded by his brother, then a medical practitioner in that city, to begin the study of medicine. This he finally did with some misgivings, became his brother's protégé[1], went to Chicago, and graduated fromRush in 1897.

Just previous to entering college, he became engaged to a young woman whom he idealized, and when, later, she gave him up to marry an old man of assured position and wealth, he faltered—"I am heart-broken," he wrote, "life is dark before me." But he turned to his work with redoubled assiduity and mastered his weakness, thankful at last that he had not become married to a woman so unworthy of him. Perhaps because of this disappointment his heart is more tender with love and pity for those who suffer. He now is happy in the companionship of a lovely, devoted wife and a sweet little girl, Buddie, in whom he is totally wrapped up.

From a recent account of a traveler's interview with him, we get the following descriptive passages:

"He is tall and large, over six feet, I should judge, with a limp due, I am told, to an illness in early life. But his carriage is dignified, his face strong and benignant. Deep-set eyes, a rugged face with tanned skin, some wrinkles, grayish hair—a face resembling in many ways that of Lincoln. It is always serious, even when humor plays about the mouth; care-marked. He was willing to show me anything or tell me anything except about himself. 'I'm a privileged man,' he said, 'just blessed with a lot of work I am doing but lamely. If I had six individualities I might help these people some.' 'To what do you attribute your great success?' I asked him. 'If you call this great success, it may be due to several things: A good father[2] and mother—and,' with a twinkle in his eye, 'a girl who jilted me juft at the psychological moment."

Several of Doctor Goodhue's friends have determined that he must not any longer refuse the honors and rewards which are due him, and it is gratifying to know that steps are being taken to have the order of knighthood conferred upon this ardent lover of his fellow men.

Some Special "Stunts" For General Men

A Series of Brief but Practical Therapeutic Suggestions

By C. ELTON BLANCHARD, M. D., Youngstown, Ohio

THE reader must not assume from the title selected that I intend to urge every doctor to be his own specialist. There are certain fields of medicine and of surgery, to be well and rightly done, that must be followed as specialties. An honest, well-trained man in any of these fields, such as diseases of the eye, should be recognized and sustained. The business conditions under which the average family doctor has now to make his living are such that it is up to every man to care for every case he possibly can with a clear conscience.

Many family doctors have grown considerably tired and fatigued from carrying to specialists good-paying cases on a silver tray, so to speak. No fee-splitting or commission bait will tempt the honest physician to turn over his cases, and when one comes along that he can not handle he will surrender it as gracefully as he can. If a specialist dares to offer him a commission, he will consider it an insult, and will never give the same man a chance to repeat it.

Perhaps what I have to say will help some, at least, to care successfully for a list ofconditions that usually fall into the hands of men who use that élite phrase, "practice limited to" this or that. If this comes true, both of us will be happy.

The first thing on my list is asthma. I am not going into the pathology, etiology, and so on, of these conditions. If you are fond of this kind of reading, examine your textbooks. Enough has been written about asthma to fill many books, but now, as ever, it is one of the troublesome things in medical practice. For this reason, it has been used by nostrum makers and quack specialists to fleece the unsophisticated. After you have tried all the means and agents you can find, there are some cases you will have to send

1. "Will has always been my 'baby,' and I take credit to myself for saving him from a business career which he never could have pursued with success."—E. S. Goodhue, M. D., LL. D.

2. Of his father, Sir Wilfred Laurier lately wrote: "He was one of the noblest characters I have met with in the course of my career."

them to Colorado or almost anywhere to seek a change of climate, and especially to seek a dry, pure atmosphere.

Lobeline Sulphate in Asthma

We have in lobelia, it seems to me, the one dependable remedy for this trouble. The newer preparation, lobeline sulphate, seems to act very nicely to relieve the spasmodic paroxysm.

Lobelia was first called to my attention by old Doctor Grover, now dead, who used to say: "I use the fluid extract of lobelia in 5-drop doses every hour until they drool at the mouth, and they will not have the asthma any more." He might have added, "until the next attack comes on."

Every case of asthma must be studied in a general way. Often if the condition of autotoxemia is removed the asthma goes with it. One should be sure there is no irritating obstruction in the upper air-passages. Bringing the blood to the peripheral circulation helps many victims wonderfully, and for this end nothing is better than glonoin, strychnine, and digitalin. I like also the alterative effect of iodized calcium in full doses, 2 grains three times a day, in these cases.

In plethoric cases I extract all the water I can from them with apocynoid in conjunction with other cholagogs. If there is indigestion, this must be attended to by the best means at your command. Of late I have been using with some success, along with this treatment, the ozone-machine. Those who are enthusiastic about the ozone treatment can give you the theory. I have never depended upon it alone.

Some years ago an asthma-formula went the rounds of the journals, and it is a good one. I have used it with good results, and repeat it here for whatever it may be worth to you:

Ammonium iodide	drs. 2
Fl. ext. grindelia robusta	drs. 4
Fl. ext. glycyrrhiza	drs. 4
Tinct. lobelia	drs. 2
Tinct. belladonna	drs. 2
Syrup tolu, enough to make	ozs. 4

This is given, a teaspoonful three times a day, and every hour during the paroxysm.

We must not forget that asthma is often a reflex condition. Not long ago Dr. Albert L. Kiraley, of this city, called my attention to a patient of his whom he was treating for a prostatic enlargement. When the treatment had restored the prostate gland to about its normal size the patient's asthma (for which he had done nothing) disappeared.

Often dilating the anal sphincters and treating a prostatitis will cure an asthma. It is worth while, therefore, in order to exclude this factor, at least to examine male patients carefully as to the rectal and pelvic conditions.

Since asthma is not a disease, but a condition—or a symptom, rather—it is needful to study your case carefully, to discover the cause. You may find it in some nervous disorder. I have found nothing better than the triple arsenates, after meals, with one or two hyoscine, morphine and cactoid modified tablets, about bedtime, which often will give a much needed night's sleep. These are suggestions merely to palliate while you are getting at the cause.

When all these things fail, as they will sometimes, your best plan is to ship your patient out west somewhere and forget him.

Hydrocele Fees for Your Own Pocket

Our next "stunt" is hydrocele. This trouble has been a fine field for the crafty bamboozlers. It is distinctly a surgical disease, and when I first came out of college I did the usual radical operation—removing the sac and all that. I am going to tell you how you may put that fee into your own pocket and earn it as fully as if you sent the man to the hospital for the best fellow on the surgical staff to jingle it in his.

You know how to diagnose the condition, of course. You are not going to mistake it for hernia, orchitis or anything else. All right, then.

How to Operate for Hydrocele

Draw off the fluid with a small trochar. Get it all out and leave the cannula in place. Now instill from one to three drams of lysol into the sac through the cannula and withdraw the tube. Massage the scrotum thoroughly, and while doing so have your patient hold down firmly over the inguinal canal, so that none of the irritating fluid will be worked up into the peritoneal cavity. It is well to put on a pressure-bandage, which may be adjusted according to the afterreaction.

If it happens, as it sometimes does, that the cavity is sacular and your injection-fluid does not reach all parts of the cavity walls, this portion may begin to secrete again and begin to fill somewhat as before. You have only to repeat the operation until you have succeeded in closing all the secreting tissue.

Some operators prefer to use the following carbolic-acid solution, made as follows:

Carbolic acid	min. 90
Dist. ext. hamamelis	drs. 6
Water	fl. drs. 6

To each 20 minims of this mixture is added 20 minims of fl. ext. quercus alba, glycerin and tincture of iodine, with water to make 4 drams.

This quantity of 4 drams is supposed to be injected into the sac and the excess squeezed out, which of course would necessitate leaving your cannula in place or a reinsertion of it after the massage process was completed.

This is a good preparation, but the lysol does just as well, and is ready for use.

Collect your fee, charged as for a surgical operation, lay it carefully in your billbook, and tell your patient to expect some pain and annoyance but that it soon subsides. See the patient in a week or a month, as the case may be; but ten-minutes' work usually ends the matter.

I have operated upon many of these men by this method with almost uniform success.

Something About Ear Troubles

Now a few words on the subject of ear troubles. The diseases of the ear are supposed to be distinctly a special field, but let me tell you now, for chronic catarrhal deafness, suppurating ears, cerumen plugs, and so on, you can do as much and as well as any specialist on earth, or at either address in the next world.

You may gain a great reputation for curing deafness by washing out plugs of ear-wax. Except for now and then a case in which you will have to soften up for a day or two with some oil instillation, your ear-syringe, a tray and a basin of hot water are all you need. Keep shooting it in until the external canal is clean, then spray with your spray-bottle, collect your dollar and say good-day; for that is all there is to it.

With suppurating ears, we have a more difficult problem. The treatment is local and internal. Locally, it is necessary to use some cleansing solution, peroxide of hydrogen, alphazone, etc. After the pus is well cleaned out, instill some of Abbott's antiseptic oil, cork it in with a plug of cotton, and then turn on your high-frequency current with a proper ear-electrode.

Whether the current carries the oil into the deeper tissues or not I cannot say, though some have claimed they could taste the oil after the treatment. The light rays of the current may do some good; in any case, I use it, for it brings good results.

Internally, I give calcium sulphide and as a tonic the triple arsenates and nuclein. Any other condition presenting itself should be attended to, and most of these cases will be cured promptly, two to four weeks, with now and then one more stubborn requiring longer time.

Chronic Catarrhal Deafness

Chronic catarrhal deafness is incurable. That is, whatever thickening of the drums exists will remain, with that much impairment of hearing. You may increase the hearing power 25 to 50 percent, and you may fully arrest the process. If you succeed in correcting the retraction of the tympanums and limber up the ossicular chain with effective massage and medication, you will cure the tinnitus aurium—something for which your patients will be extremely grateful. Ear noises have been the cause of many suicides.

You should have an air-pressure contrivance of some sort. When attached to your spray-bottle, with the usual menthol, etc., inhalant, spray out the external canals, nose, and throat. Then dilate the eustachian tubes by inserting your large-tip spray-bottle into one nostril while you hold the other closed. With your air pressure going, ask the patient to swallow, which will open and push out the drums, at the same time depositing some of your spray all along the way. If the patient has trouble to make the swallowing effort, a sip of water held until you are ready will do the trick nicely. Very rarely will you need to use the eustachian catheter or do any probing. A little practice will enable you to limber up this chain of bones and their attachments and get the drum to stand out as it formerly did.

Now apply your massage. Use no suction pumps, or air-machines of any sort on the external canal. More harm has been done with suction-engines than can be estimated. Vibratory massage is the thing.

I use an ordinary hand-vibrator of the Shelton or Victor type, and instead of using the ear-tips they recommend I use a long rectal tip, which gives me a soft and pleasant vibration. By asking the patient to tell you when you have it centered properly that the impulse strikes the drum and the bony chain, you will have no trouble to set up the motion in the part desired, without irritating the external canal or adjacent parts. This part of the treatment requires a little mechanical ingenuity, but is easily done.

After vibration, use high-frequency in both ears with ear-electrode inserted as close to the drum as convenient, so that the bulk of the current may enter the drum, and not the sides of the canal. Here, again, we may obtain some cataphoric action, and the noise and vibration of the current is helpful.

You know, of course, what to do in a general way for these people. They all take cold easily. You must stop this. Tone up the skin, improve the digestion, correct the catarrh of the stomach they usually have, aid elimination, get better tone.

I had in mind to say a few things about nasal polypi, enlarged tonsils, hemorrhoids, fistulas, fissures, etc., but my space is already filled, so these must wait on another issue. If these notes are helpful, say so, and more will be forthcoming.

[We "say so."—Ed.]

The Antithesis of Medication

A Talk about the Mexican Rebellion, Psychotherapy, the Treatment of Fevers and of Wounds, and other Matters of General Interest.

By ROBERT GRAY, M. D., Pichucalco, Mexico

UNTOLD horrors have darkled and sprinkled red sanguinous showers over this distracted country since last I bent me over a greeting to the fraternity of my native land. RUIN seems pendulous across the azure dome of the sky in letters of flame and blood.

American brothers, dismiss, I entreat you, dismiss from your minds the absurdity of seeking betterment of fortune anywhere in Mexico, where no Americans nor anything American are wanted.

Neither combating party molests me—but, then, I have lived here half a century, serving the poor and lowly. The American rubber plantations near me were cleaned up by rebels the other day—since June 15. Let this answer the hundreds of letters to which I cannot attempt to reply personally.

You people are so jumbled in contrarieties, both of theory and practice, and listing such formidable arrays of new ailments and remedies, that it seems vain and idle presumption to address you. Viewed from my standpoint, Dr. J. M. French and Dr. Richard Slee preached two sermons, in May CLINICAL MEDICINE, replete with the sterling ring of indomitable truth, of precious value in any critical practice.

(As I put the period to the last sentence, the rebels came galloping past my door—and they are here yet; that is, the day after that. There are no federals to oppose them.)

See What Old-fashioned Things Do

In your formidable procession of uncertainties, far the better plan would be to prove out the efficacy of a few familiar drugs, rather than be influenced by the doubtful experiences of others, many of them denying *in toto* that they possess any curative properties. I have proved them thus long since; and am still faithfully served by such as made legitimate promises.

The fallacy that fever is necessary and serviceable under any kind of circumstances holds surprising repute among the very elect. Maybe you have fevers of a severity unknown here; yet, I do not believe a word of it. I get rid of a fever's presence with the least practicable delay, and strive to keep it away. In some cases of intense inflammation, in pleurisy, and in puerperal fever, this is impossible, I grant. Still, alleviating modification follows my treatment, the same gradually dominating the fever, as the inflammation abates; and fever is necessary to sustain inflammation. We have fevers here that jump from 38° to 42° C. in a few minutes; and I know no fever not thus perilous, save in current chills and fever.

I use coal-tar derivatives (acetanilid by mouth, when possible; otherwise, equal parts of antipyrin and quinine sulphate liquefied, per rectum), to save the situation when fever is met hovering near the dead line. When the effect is attained, quinine arsenate is the reserve force dependable in pernicious fever; aconitine is the thing in pneumonia and typhoid fevers; and veratrine, in puerperal fever, to guard against recurrence; for coal-tar products are not curative. I use aconitine in solution for children in nearly all febrile contingencies.

Tincture of iodine lends surprising results in smallpox. By painting the pitting surfaces

two or three times daily with it, the scabs dry and fall off, leaving no marks, and being completely disinfected.

Also, 3 drops of the same tincture, in half a tumblerful of water, every half hour for three doses arrests hiccough of a perilous nature. Compound tincture of iodine, 5 drops in a teaspoonful of water, stops vomiting from any cause. Repeat if necessary.

One drop of wine of ipecac, taken after each attack, stops vomiting promptly—even black-vomit yielded for me several times in the epidemic of last year. One drop of same preparation every five minutes stops bleeding of the nose or lungs or other region.

I have effectually cured a sufferer from hookworm-disease with naphthol and calcium sulphide given internally, with purging and proper feeding. Naphthol, internally, had long been my sure cure for pinworms, which in duced the other experiment. Hookworm is rare here, as my investigations made for the Instituto Medico Nacional indicate.

The practical absence of pellagra here is a wonder, where a larger percent of moldy and weavel-infested corn is eaten by people than in probably any other country; this seeming to admonish us that such is not the medium of infection. I have been unable to find any for experimental observation.

The privies of all the world here, save of some foreigner, like myself, are the woods or behind stables or hedges, where chickens, hogs or buzzards devour the excrement instanter. This may be the reason why pellagra does not develop. There is abundant pernicious anemia here, very like that of Puerto Rico and other points where hookworm is the cause; but here the malady is found to be the outcroppings of vice—most frequently a compound vice, including excessive masturbation in both sexes. Usually relief is prompt upon abandonment of the cause.

An Enthusiastic Word for Psychotherapy

Here is a grand field of helpful utility by the employment of psychology, above and beyond any ordinary degree of rational anticipation. Such minds, submerged in the profound strata of ignorant degradation, seem as if electrified by a magnetic thrill when gently subjected to the subtle influence of psychology—possibly the first and only elevating glint of true light ever penetrating the dark corridors of despairing brains.

Do not spurn psychology. It will intensify the action of your drugs and help you beyond the latitude of physical medication. There is more in the realm of mind than in the stomach and bowel; more than your ethical rules of practice have ventured to inculcate. "Quack mind-healers" have groped in the startling shadow of sublime truth which none of us dreamed would burst forth in dazzling brilliancy, illuminating where there never had been hope of light.

One beauty of psychology possesses—it is an endowment unpatentable and free from proprietary manipulation: it is obedient to the command of any who cares to put its helpful attributes in requisition.

Wonders of Phenol Wound Dressings

These troublous times of bloody anatomical carving have lent me some pleasing, if horrible, instruction. One forearm lacerated fearfully and the bone broken in two places, and split, the hand hanging limp, was all put in place with a fair degree of regularity, poured full of liquefied phenol, well cushioned with a cotton compress and bandaged. Another had the articulation of the wrist parted, the bone cut somewhat at both points, the hand being nearly severed. Treatment the same. In both these cases, circumstances did not permit seeing the patients again; and the dressing was so cemented by blood that they were left so, there being little pain and no sign of inflammation. These dressings became loose of themselves some five or six weeks later, the lesions beneath being perfectly healed, as I have been advised.

Still another wounded was brought to my office in the night, with a machete-cut that struck the back of the hand an inch above the finger articulations, parting the middle and the ring-fingers an inch below the articulations, cutting out to the bone a slice of the forefinger, and leaving the little finger hanging by a strip of outside skin at the articulation. I had no assistant and only a poor light; and the two men who brought the patient had fainty tendencies at the sight of blood. The condition was such that I dared not apply anesthesia, not even H-M-C. Hence, I amputated the two stumps of fingers at the articulations in such short order that neither patient nor companions realized just what I was at till it had happened.

I covered the naked surfaces with cotton saturated in liquified phenol, putting thick cushion over and bandaging. The next morning I loosened the dressing with naphthol oil. There had been no hemorrhage after applying the phenol. I washed the outside lesion to the margin with alcohol, dressed with compound phenol (phenol, camphor,

chloral, equal parts), put a thin cloth covered with petrolatum over this, to prevent the cotton from sticking, then cushioned and bandaged. Thus was the treatment repeated for three days. Then followed an ointment of petrolatum, turpentine, and beeswax, 15 percent of phenol, and 10 percent of naphthol. There was never any pus. Never a drop of water was applied, the lesion being wiped clean with cotton. Not an hour of sleep was lost, nor the slightest complaint of pain, save when attempts were made to put the crazy little finger into some semblance of shape—although without success, there being nothing to stitch it to; the articulation being destroyed and the leaders parted; still, it grew fast, a mere hook on the side of the club of a hand. The thumb and fore-finger are perfectly natural in shape.

There is a weird fascination about the subtle mystery of phenol and its compounds; how the pure crystal, liquefied by heat, destroys the last particle of impurities in fresh wounds; staunches blood in the act of application; forms with the blood-serum an impervious shield over the face and edges of lesions—horrible wounds healing perfectly without further treatment save the initial first-help dressing, without inflammation, pus or pain.

The compound phenol preparation performs miracles almost as magical in suppurating wounds and old sores of any class, even syphilitic ulcers, without limit of employment at a dressing, as it is not absorbed any more than is the pure substance on fresh lesions; both being harmless to the healthy tissues, which they guard in a state of purest disinfection. Caution: The *pure phenol must not be employed where there is any watery formation; here the compound phenol may be used with impunity.*

THERE are men and classes of men that stand above the common herd: the soldier, the sailor and the shepherd not infrequently; the artist rarely; rarer still the clergyman; the physician almost as a rule. He is the flower (such as it is) of our civilization; and when that stage of man is done with, and only remembered to be marveled at in history, he will be thought to have shared as little as any in the defects of the period and most notably exhibited the virtues of the race. Generosity he has, such as is possible to those who practice an art, never to those who drive a trade; discretion, tested by a hundred secrets; tact, tried, in a thousand embarrassments; and what are more important, Herculean cheerfulness and courage. So it is that he brings air and cheer to the sick room, and often enough, though not so often as he wishes, brings healing.—Robert Louis Stevenson.

WHAT OTHERS ARE DOING

EMETINE AS A HEMOSTATIC

Valassopoula, a Greek physician of Alexandria, reports (*Bull. d. l. Soc. d. Hôp.;* through *Ther. Monatsh.*, 1913, No. 8) that hypodermic injections of emetine (Gm. 0.02) caused prompt arrest of severe hemorrhages in a case of rectal carcinoma. He also has had good results from these injections in the hemoptyses of tuberculosis.

TREATMENT OF VACCINAL ULCERS

According to Sexton (*Arch. of Ped.*, Feb., 1913), ulcers on the vaccination site, the result of extraneous infection, improve rapidly when the wound is filled with antistreptococcic serum. A small wet dressing of this serum should be applied, and over this some oilsilk, in order to keep the dressing moist as long as possible. The latter should be remoistened with the antistreptococcic serum three or four times daily, so as to prevent the gauze from becoming hard and stiff. This is another illustration of the value of the use of antistreptococcic serum locally.

HORMONAL FOR CONSTIPATION

In a paper read before the Congress for Internal Medicine, Luizi Fornaca stated (*Medicina Nuova*, No. 44, 1912; through *N. Y. Med. Monat.*, No. 10, 1913) that he has obtained good results, in a number of instances of chronic constipation, from hormonal; only, however, when administered intravenously. The action sometimes has continued over several weeks; even, in one case, two months. Several times postoperative paralytic ileus was thus overcome by this means.

REASSERTION OF THE SPONTANEOUS GENERATION OF LIFE

In opposition to the weight of scientific evidence, and unabashed by the volume of attacks upon his previous public assertions, H. Charlton Bastion, in a contribution to *The British Medical Journal* (Nov. 12, 1912), reasserts his conviction that life is generated spontaneously. His lengthy (illustrated) article describes his further experiments in which he has seen low-grade organism originating in tubes hermetically sealed, sterilized and subjected to prolonged incubation.

TRANSPLANTATION OF FAT-TISSUE

Operations involving auto- and heterotransplantations of all kinds of anatomical structures are rapidly growing in number, as well as in audacity.

One procedure of this nature is the free transplantation of fat-tissue into joints. Thus, for instance, Roepke has reported (*Wien. Med. Woch.*, No. 22, 1913) that he has inserted fat-tissue, in many cases, into the joints of fingers, wrists, elbows, shoulders, hips, and knees, and that flaps the size of the palm of the hand survived, and results were the best.

NEW PERCUSSION METHOD OF DIAGNOSING APPENDICITIS

A new, preoperative method of diagnosing appendicitis by percussion dorsally is described by W. Ewart in *The British Medical Journal* for December 28 last.

Ordinarily, in percussing the pelvic region, it is pointed out by the author, a resonant sound is obtained over the sacrum and the iliac alæ, while one gets two relatively dull sounds corresponding to the region of the posterior tuberosities. This latter muffling is caused in part by the position of the large large blood-vessels, but is more pronounced on the right side, because of the airlessness and thickness of the appendix.

It is this latter phenomenon which Dr. Ewart utilizes for his diagnostic purposes; for, when there is present inflammation of the appendix, the muffling of the percussion-sound at this spot (on the right side) is greatly increased, and also extends to the ilium and the sacrum. Furthermore, this symptom is more noticeable in retrocecal changes and abscesses, which many times cannot easily, or not at all, be diagnosticated by abdominal palpation; hence, is doubly valuable.

Operative removal of the diseased appendix causes this right-side diminution of the percussion-sound to disappear, or it leaves (more rarely) a tympanitic percussion-sound. If this does not happen, then the operation was imperfect or there is some complication—an abscess, for instance. The article should be read in full in the original.

PARENTERAL: A CONVENIENT NEW WORD

Of late, we occasionally encounter in our German exchanges a word new to us and not recorded in the very latest medical or general dictionaries, yet, withal, a most handy addition to our vocabulary and deserving a permanent place in technical literature. The word is "parenteral," a compound of "para" (beside, beyond, outside) and "enteralis" (pertaining to the enteron, or intestine); its meaning, thus, being, in medicine, "outside of or not passing through, the intestinal canal."

The application of "parenteral," thus far, is to the method of administering remedies, when one wishes to speak generally of hypodermic, intramuscular, intravenous, epidural, and other methods, as opposed to giving them by way of the mouth. E. g.: "Some remedies must be administered parenterally, being without effect when taken internally."

TO PREVENT ACCIDENTAL POISONING WITH BICHLORIDE TABLETS

Inasmuch as cases of accidental poisoning with mercury-bichloride tablets are increasing in frequency, F. M. Apple, among others, suggests (*Drug. Circ.*. Aug., 1913) that these tablets be given the shape of a coffin, and, better, to impress upon them, sunken in, the familiar skull and crossbones. Druggist Apple wants this made compulsory.

The idea is not a bad one—as applied to the article sold promiscuously to the lay public, of course; and, since these tablets are to be dissolved in a large volume of water for injections and antiseptic lotions, it would be still better—for obvious reasons—to make them fully the size of throat lozenges, color them dark-blue, and scent strongly with thymol. The containers also might be coffin-shaped. Still, such tablets for use by professionals (and legally strictly confined to them) should not come under this regulation.

There is something startling in this sudden outbreak of bichloride deaths, and in that revelation of a bottle on every woman's medicine-shelf, side by side with the equally ubiquitous aspirin. There is something sinister in this. Surely, not all these people can keep this powerful germicide at hand for mere disinfection purposes—then, how, when, where have they learned of uses of this harmful chemical not ordinarily suggesting themselves, even to the medical mind? How is it that these bichloride tablets by the bottle seem a common commodity in every drugstore, how is it that every young girl attaining to puberty seems to have them handy?

BIOLOGIC THERAPY IN KIDNEY AND BLADDER INFECTIONS

Kreuscher (*Surgical Clinics* of John B. Murphy, Aug., 1913, p. 552), claims that a large field for biologic therapy will be found in kidney and bladder infections. The colon bacilli, staphylococci, and streptococci, and often the pneumococci gain entrance to the urinary tract and cause marked frequency and often painful micturition. One of the most striking cases of this type came to Mercy Hospital late in October, 1911.

The patient was suffering from frequent and painful urination, this having extended over a period of about ten months. After taking an accurate clinical history, it was found that the woman had been troubled with dysentery of several weeks' duration, and that her present trouble dated from that time and had become progressively worse.

Cystoscopic examination showed no pus coming from either ureter, also the absence of a neoplasm or foreign body in the bladder. The culture from the urine warranted the diagnosis of cystitis caused by the bacilli coli and staphylococci. The autovaccines were administered about every five days, whereupon the patient made a rapid and complete recovery, and has remained permanently well.

Another patient came to the office on December 11, 1911, giving the history of a continued illness for four months, with repeated daily attacks of severe pain deep in the perineum, associated with chills and high temperature, frequent urination (every quarter to one hour), and presence of large quantities of pus in the urine. The prostate gland was not perceptibly diseased. Culture from the urine showed bacilli coli and staphylococci.

Vaccines were prepared and given, and the

patient improved rapidly during several weeks, followed by a period of nonimprovement for a few weeks. Another culture showed that all the staphylococci had disappeared, leaving a pure culture of bacillus coli. From this a vaccine was made and injected in the usual way. This was in February, 1912. On April 1, 1912, Dr. Murphy made the following note: "The pains are all gone. Only one morning urination. The urine is absolutely normal." Patient permanently cured. On July 2, 1913, the patient reported himself perfectly well, with no evidence of return of the trouble.

A NEW PLANT-DRUG FOR CHOLELITHIASIS

Dr. Hagelweide, of Lunow, tells (*Klin.-Ther. Woch.*, 1913, No. 18) of a tropical plant claimed to possess curative virtues for cholelithiasis. The plant (marketed by M. Sperling, Berlin) is imported from the Sunda Islands, where it is known as daun komis kodjing; but has not as yet been classified. An infusion of the leaves and stems is used by the natives. Hagelweide claims to have had success with this new drug.

REMEDY FOR EPILEPSY IN CHILDREN

Spasmosan (composed of sodium bromide, phosphorus and iron compounds, cascara sagrada, and valerian infusion) is recommended by Dr. A. Fraenkel, of Berlin (*Allg. Med. Zentr.-Ztg.*), for treating epilepsy in children. In the case of a girl of three years, a permanent cure was effected when for two years no sedative, not even a bromide—30 grains per day—had given any relief.

A better sedative than the bromides (the really potent factor in "spasmosan") is solanine—better because even more effective therapeutically and practically non-toxic. It should be used in practically every case of epilepsy. Laxatives and intestinal antiseptics are almost always indicated in this disease; iron and digitalin may be needed; and focal sources of reflex irritation, especially nasal, intestinal, and genital, should always be sought, and removed if possible.

STERILE GLYCERIN AS A DRESSING FOR WOUNDS

Hardouin, of Angers, recommends, in the *Province Médicale* (Aug. 2, 1913, p. 344), the employment of pure, sterile glycerin on ordinary sterile cotton compresses in the treatment of wounds. The gauze should be thoroughly soaked or impregnated with the glycerin before applying, in order to prevent adherence to the raw surfaces. The principal advantage claimed for these applications is, that they suppress almost completely the pain throughout the stage of dressing, even in conditions generally the most painful, such as appendicitis or osteomyelitis.

Glycerin is hygroscopic and favors osmosis of the liquids from the depths of the wound toward the compresses and the exterior, thus having a great advantage over oil dressings, which prevent the compresses from absorbing the discharges, prevent drainage of the wound liquids to the exterior, and therefore close, instead of draining, the cavity. When absorbed, glycerin is not harmful, nor does it cause any discomfort, provided it is neutral in reaction, giving merely a brief sensation of warmth, which is not disagreeable.

Thanks to its absorptive power, the glycerin cleanses quickly serous wounds, and, being free from pain, the compresses may be carried down to the bottom of troublesome wounds, in order to cleanse and drain them. The compresses can be removed readily from the deepest wounds, and that without pain, leaving behind a raw surface, not bloody, of good appearance, and to which there is no adherence whatever. Furthermore, glycerin, when used near the peritoneum and intestines, acts as a laxative, which is also an advantage.

The advantages claimed for the glycerin dressing are summed up by Hardouin as follows: (1) easy to prepare; (2) inexpensive; (3) painless; (4) drains and cleanses thoroughly; (5) prevents remote secondary infection; (6) is laxative in certain conditions; (7) is entirely inoffensive.

BELLADONNA FOR REDUCING OBESITY

Many remedies have been suggested for the reduction of superfluous fat, the latest being offered by Franke, who, in the *Medizinische Klinik* (1913, p. 995), advises the administration of 15-minim doses of tincture of belladonna thrice daily, about fifteen or twenty minutes before meals. It is claimed that this remedy diminishes hunger, as a consequence of which one's weight is reduced. Franke claims that no ill effects have been observed from this medication, indeed, the condition of the heart is really improved. Obviously, this treatment should be carried out under strict supervision.

It naturally occurs to the average physician that the use of belladonna in the way suggested would cause dryness of the mouth and throat, besides more or less disturbance of vision, symptoms which always will be uncomfortable and sometimes depressing. A more satisfactory method of treating obesity is found in the obesity tablets, which contain colchicine, strychnine, berberine, caffeine, phytolacca, etc. Even when this remedy is used, it is advisable to restrict the quantity both of food and of liquid, and to drain out the excess of fluid with laxative salines. The addition of thyroid extract to this treatment will practically always bring results.

PHOSPHORUS IN DISEASES OF THE LUNG

Ferguson Lemon, of Melbourne, Australia, has contributed to *The New York Medical Journal* (Aug. 16, 1913, p. 320), a remarkable paper upon phosphorus. For a number of years Dr. Lemon has been using this drug in the treatment of acute and chronic pulmonary conditions. From his former partner he had learned that pure phosphorus (1-1000 to 1-200 grain at fairly short intervals) would bring about an almost marvelous shortening of the crisis of lobar pneumonia. While treating such a lobar pneumonia occurring in a patient far advanced in pulmonary tuberculosis and suffering from recurrent hemorrhages, he learned that, when given in 1-500-grain doses, the phosphorus had a wonderful effect upon the tuberculosis. The picture was one of very widespread tuberculosis degeneration.

Observing the marked improvement following the temporary use of phosphorus, Dr. Lemon decided to give it a further trial for a period of about three months. At first there was increased expectoration, but the night sweats were diminished. Soon after this, the cough began to be harder and the sputum lessened in quantity. The temperature meanwhile declined. After the tenth week the cough was practically the only troublesome symptom; the night sweats had completely disappeared and the sputum was practically absent. At the end of three months the condition of the lung was wonderfully improved, the patient had gained fourteen pounds in weight and seemed quite a different man. This method of treatment was continued, and the patient is today comparatively healthy and able to carry on his work as a proofreader.

Following that experience, Dr. Lemon has employed phosphorus in a number of other cases of tuberculosis several of which are reported in detail. While it has been mainly used in tuberculosis of the lungs, it has also been tried in tuberculous disease of the glands and joints, and where the condition has not come to actual suppuration, some improvement and apparent cure has resulted.

The following prescription has often been employed:

Calcii hypophosphitis .....drs. ½ to 2
Tincturæ phosphori (1:1000)..drs. ½ to 2
Liquoris arseni iodidi (1:100)..drs. ½ to 2
Syrupi ferri iodidi.....ozs. ½ to 1
Aquae, q. s. ad.....ozs. 6

M. et Sig.: One dessertspoonful in water, four times a day after food and at bedtime.

In one case described by Dr. Lemon there was no improvement; three were improved but not cured; and ten are apparently well.

Dr. Lemon also recommends the use of phosphorus in the treatment of acute pneumonia. He says that in several hundred patients treated with it, there has not been a death, except one, this being a person suffering from chronic cirrhosis of the liver.

The usual prescription for pneumonia is as follows:

Tincturæ phosphori (1:1000)..drs. ½ to 1
Liquoris ammonii acetatis....oz. 1
Spiritus ætheris nitrosi.....drs. 4
Aquæ, q. s. ad.....ozs. 6

M. et Sig.: One dessertspoonful hourly for six doses. At alternate hours for six doses. Then every three hours till crisis.

THE THERAPY OF PHENOLPHTHALEIN

The exact mode of action of phenophthalein still is a moot question, one explanation (that of Vamossy) being that in the intestine it is converted into disodium phenophthalein. Now A. V. Sztanskay claims (*Apoth. Zeit.*) that the soluble active compound is phenolphthalein sodium carbonate ($2\,C_{20}\,H_{14}\,O_2$ $6\,Na_2\,CO_3$), a combination not before known.

TO GET RID OF LICE: VALUE OF KEROSENE

If just hair-oil will suffice to suffocate head-lice, as a correspondent states in the August number (p. 684), that ought to be "the best" remedy of all. It seems, though, that the oil must be poured on quite to saturation; in which case the victim better should wear an impervious close-fitting hood for a day. However, a sure and harmless (even useful) remedy is kerosene, which kills the "critter" instantly, while being good for dandruff and

falling-out of the hair. (It is just as good on dogs, and on cats, if applied sparingly; little kittens are very sensitive.)

The simplest way to use kerosene is with a pipette, dropping it upon the lice when in range of vision, and to conclude the "seance" by liberally moistening the scalp with it. Repeated daily, this quickly overcomes the plague. A daily actual saturation, or wetting, with the kerosene would act more promptly.

By the way, kerosene ought to be employed far more freely and regularly as a hair-dressing, its present state of purification having deprived it of all disagreeable properties. As a rule, a pipetful every morning is much superior to grease oils, while rendering the hair pliable, fluffy-like and free from stickiness. One family (three long-haired ladies and one man) has thus used it for fifteen years, with greatest satisfaction.

BROMURAL IN NEUROSES OF CHILDREN

Bromural, or mono-brom-iso-valerianyl-urea (nearly tasteless and not readily soluble in cold water), is warmly recommended by Schaefer (*Ther. d. Gegenw.*, No. 3, 1912) in all functional disturbances of the nervous system in children. Among the disorders mentioned are, for instance, epilepsy, bedwetting, night-terror, wakefulness, and infantile hysteria.

EMETINE TREATMENT OF AMEBIC DYSENTERY IN NEW YORK

Dr. William V. Hayes reports, in *The American Journal of Surgery* (Sept. 1913, p. 349), that he has had an opportunity to test the emetine treatment of dysentery in two or three instances, with results that have been uniformly satisfactory. He describes one case in detail.

The patient was a young man, age 21, who had never been in the tropics or in the South. He presented himself at the Polyclinic Hospital the latter part of February. He began to have diarrhea in September, 1911, and in December of the same year discovered that he was passing blood. After two weeks in bed he felt well for six or seven months, when the dysentery returned. He secured relief and was in fair health until December, 1912, when he was troubled again with frequent, bloody movements—ten to twelve daily. These had persisted, during the preceding eighteen months, the patient losing fifteen pounds in weight. For some time he had been unable to work.

A careful examination showed the presence of shallow ulcers in the rectum, covered with grayish membrane and bleeding easily. The feces were thin, blood-stained, and contained mucus, and the laboratory report showed "amebae present in abundance."

The patient was put to bed and placed on a restricted diet, but in two days there was little improvement. He now was given ½-grain doses of emetine hydrochloride, injected into the gluteal muscles twice daily for three days, then once daily for seven days longer. After two days of this treatment the blood and mucus disappeared from the stools and the number of dejections diminished by two or three daily. On March 4, no movement occurred until an enema was given.

The diet remained the same during the first week in the hospital, and after this the ordinary soft diet was permitted. After two weeks of this treatment the rectal ulcers were found to have healed, when the patient was permitted to go home, since which time he has speedily gained in weight and strength, with no recurrence of the dysentery. Later examination of the stools showed no amebae.

EMETINE IN DYSENTERY: REPORT OF THIRTEEN CASES

From *The New York Medical Journal* we glean the following excellent abstract of a paper upon emetine, published in *The China Medical Journal* for July, 1913, by Dr. A. C. Hutcheson, who has employed emetine hydrochloride in thirteen cases of dysentery. His conclusions are as follows:

1. Emetine in amebic dysentery is simply wonderful in its efficacy.

2. In undiagnosticated cases of chronic dysentery, it will succeed in the majority, as most of these are amebic.

3. In double infection of ameba and schistosomum, it will kill the amebæ and probably stop the dysentery.

4. In pure schistosomum cases, it is at least worth trying.

In 7 of the 13 cases, the ameba was found on examination. One case was, apparently, amebic, though examination of the stools failed to show the presence of amebæ. The patient left the hospital on the seventh day, cured of symptoms. In 2 cases, there was infection with both the ameba and schistosomum japonicum. In 3 cases, the infection was with schistosomum alone. All 3 were chronic cases. In 2, blood had disappeared from the stools on the sixth day,

under emetine. In the third case, the patient left after seven days, showing no improvement. In this case, the author found an active miracidium at the end of the treatment, which he thinks would rather argue against the efficacy of emetine, at least so far as affecting the eggs is concerned. The emetine in these dysentery cases was administered in 1-3-grain doses of the hydrochloride, twice daily, by hypodermic injection.

INFANTILE DIARRHEA CURED WITH BULGARIAN BACILLUS TABLETS

One of the most convincing demonstrations of the value of Bulgarian baccili in the treatment of infantile diarrhea is furnished by Ralph Oakley Clock in a paper contributed to *The Journal of the American Medical Association* (July 19, 1913, p. 164). Dr. Clock had opportunity to demonstrate the value of this method of treatment (he calls it the "implantation method") in the outpatient department of the Babies' Hospital of the city of New York during the summer months of 1912. Every infant suffering from diarrhea, without selection. was placed upon this treatment. Altogether, 117 children thus affected were treated; of these, 116 recovered and one died, the death occurring in a case of severe enterocolitis which had persisted for two weeks prior to treatment.

The ages of the patients ranged from six weeks to two and one-half years. There were 4 cases of enterocolitis and 113 cases of gastroenteritis; and of the latter 47 were mild, 52 were severe, and 14, toxic. In 46 cases, the number of stools daily ranged from 10 to 15, and in the remaining 71, from 6 to 10. Mucus was present in 63 cases and blood in 18. In 49, there was an elevation of temperture. Of these patients 16 were breast-fed and 101 were bottle-fed.

All these patients were immediately placed upon pure culture of the true bacillus lactis bulgaricus, given in tablet form, one or two tablets being administered every two or three hours; although in severe cases two or three tablets were given every two or three hours before and after each feeding, making in some instances a total of 42 tablets in twenty-four hours.

The striking thing about this method of treatment was, that in 74 babies the mode of feeding was not changed; that is, breast-fed babies were permitted to continue to nurse and the bottle-fed babies received their regular milk or cereal mixture as before. Presumably as a method of "control," 43 of the little patients were placed upon the classical starvation diet of barley-water for twenty-four to forty-eight hours, after which small quantities of milk usually were allowed. Of the 32 on the starvation diet, 29 were given a preliminary dose of castor oil.

As a result of the administration of the Bulgarian bacilli, the number of stools usually decreased very rapidly, although this did not always occur. Within an average of 3.1 days, the color of the stools became normally yellow, while mucus and blood invariably disappeared on the second day. As a rule, vomiting ceased and fever subsided at the same time, while the appetite immediately improved.

The most striking feature of the treatment was the phenomenal gain in weight. This was most remarkable in those babies who were continued on the milk diet. Every one of all the 74 patients, thus treated, whether breast-fed or receiving milk or a mixture of milk and other foods, gained rapidly. The average gain in these patients was 1.2 ounces for the first twenty-four hours and 6.2 ounces at the end of the first week.

The patients on the starvation diet also generally increased in weight, but they showed an average gain only of 0.2 ounce at the end of the first day and 1.7 ounces at the end of the week. While every patient (except the one who died) improved upon the Bulgarian bacilli tablets, the most decided improvement was manifested in those who continued to receive milk.

Dr. Clock is of the opinion that starvation diet, accompanied by purgation, is productive of loss of weight and of strength and serves to prolong the course of the disease. He further believes that such a method of treatment can no longer be advocated in the treatment of infantile diarrhea after observing such striking results following the use of the Bulgarian bacillus in connection with milk feeding.

THE PHARMACOLOGIC ACTION OF HELENIN

While helenin is an active constituent of elecampane (inula helenium), it is also present in helenium autumnale, a well-known American plant found all over the United States, and by some believed to be responsible for cases of hay-fever. This plant possesses marked sternutatory properties and for this reason is commonly known as sneezeweed.

Paul D. Lamson, in an interesting study of the pharmacologic action of helenin

published in *The Journal of Pharmacology and Experimental Therapeutics* (July 1913, p. 471), asserts that this sneezing may possibly be accounted for by the fact that helenin is a local irritant to the mucous membranes. He says: "I personally know of a dinner at a yacht-club in Marblehead where the room and table were decorated with helenium autumnale. When the guests arrived one after another began to sneeze and weep to such an extent that all the flower decorations had to be removed."

Helenium autumnale has a very marked poisonous effect on cattle, horses, and mules, probably owing to its irritant action upon the mucous membranes.

Crystalline helenin, Dr. Lamson states, has a very bitter taste. The most characteristic effect of the drug is its local action on the mucous membrane. When working with it in powder form, it causes violent sneezing and lacrimation; and the same action is exerted upon the mucous membranes of dogs and rabbits. Applied in a salve to the upper arm, it causes no redness or irritation. A half-saturated watery solution, when injected subcutaneously, produced a burning sensation lasting some ten minutes, followed by considerable edema, but without any sign of abscess formation. No general or absorptive action was shown after subcutaneous injection.

Helenin is shown to be a severe irritant to the intestinal tract, its action here being comparable to that on the eye and the mucous membrane of the nose. Given to a dog, it caused vomiting, tenesmus, passing of yellowish, slimy and bloody stools, and finally death. Albumin was found in the urine, with granular, epithelial and hyaline casts.

Tested on frogs by injection into the dorsal lymph-sac, it was found that the respiration first stopped, then increased in force and frequency, and then returned to normal. The helenin also caused slowing of the heart, and finally cessation of pulsation of that organ, which came to a standstill in one or two hours in a semi-dilated condition.

The conclusion reached is that helenin causes a general paralysis of the heart, its action being exerted upon the heart-muscle itself. He concludes that the drug cannot be classed as a protoplasmic poison, and that it has no noticeable action as an antipyretic.

Lamson points out that helenin has been mentioned in the literature as a tonic, febrifuge, anthelmintic, diaphoretic, and as an antidote for colds as well as for venereal diseases. Its pharmacologic properties, he holds, justify its use as an errhine. It could be used, in small doses, as a stomachic, by reason of its bitter taste and its irritant action on the gastric mucous membrane. As a vermifuge, its intense local irritant action would exclude its use, except in very dilute solutions under which latter condition its action on the parasites would be doubtful. Readers of this journal will also remember that helenin has been highly recommended in whooping-cough and to control cough, especially when associated with too abundant expectoration.

ELECAMPANE, OR INULA HELENIUM

Physicians who use that excellent remedy, helenin, the active principle of elecampane, will be interested in an article on inula helenium in *The Eclectic Medical Journal* for March (p. 120), written by Dr. Herbert T. Webster. He says that this remedy is particularly indicated in the subacute stage of bronchial irritation, especially in cases where the cough is deep, harsh and rasping, has continued for several days and the thoracic muscles have become strained, sore and tired. There is a feeling of discomfort behind the sternum, especially when coughing. Often there is more or less headache, resulting from cerebral congestion attending the repeated coughing. When headache is present it may be relieved by elecampane alone, or the addition of small doses of iris will be found helpful. Whether the cough is tight or loose, is not a matter of great value as regards the indication for elecampane. Dr. Webster has never employed this remedy in anything except winter cough, but it may be of value in other forms, he is convinced.

Readers of CLINICAL MEDICINE should use helenin more. The suggestions just given will help to its more intelligent employment. Reports will, of course, follow.

COMPARATIVE STRENGTH OF THE STRYCHNINE SALTS

From time to time inquiries have been received from readers of CLINICAL MEDICINE as to the relative alkaloidal strength of the different salts of strychnine. This information lately has been supplied by George Lunan in a brief article contributed to *The Pharmaceutical Journal and Pharmacist* (Aug. 23, 1913, p. 322).

Mr. Lunan presents a number of tables comparing the basic strength of the most important salts of the alkaloid. In Table I, he shows that, practically, strychnine arsenate contains 69 percent of strychnine;

while the sulphate contains 78 percent; the hydrochloride, 84 percent; the nitrate, 84 percent; and the formate, 88 percent. Tables II and III are presented as given by Mr. Lunan:

Table II.—The amount of basic strychnine alkaloid contained in the dose of the respective salts as given in the top line:

	gr.	gr.	gr.	gr.	gr.	gr.	gr.
Dose of salt	1-15	1-20	1-30	1-40	1-50	1-60	1-100
Strychnine contained:							
Arsenate	1-22	1-30	1-44	1-60	1-72	1-88	1-114
Sulphate	1-20	1-26	1-40	1-52	1-64	1-80	1-128
Nitrate	1-18	1-24	1-36	1-48	1-60	1-72	1-120
Hydrochloride	1-18	1-24	1-36	1-48	1-60	1-72	1-120
Formate	1-17	1-23	1-34	1-46	1-56	1-68	1-112

Thus 1-15 grain of the hydrochloride contains 1-18 grain of basic strychnine.

Table III.—Showing amount of the respective salts equal to the fractions of a grain of strychnine alkaloid indicated in the top line:

	gr.	gr.	gr.	gr.	gr.	gr.	gr.
Strychnine alkaloid	1-15	1-20	1-30	1-40	1-50	1-60	1-100
Contained in:							
Arsenate	1-10	1-14	1-20	1-28	1-35	1-40	1-69
Sulphate	1-11	1-15	1-22	1-30	1-30	1-44	1-78
Nitrate	1-12	1-17	1-24	1-34	1-42	1-48	1-84
Hydrochloride	1-12	1-17	1-24	1-34	1-42	1-48	1-84
Formate	1-13	1-18	1-26	1-36	1-44	1-52	1-88

From this table it will be seen that, for instance, 1-12 grain hydrochloride contains 1-15 grain of basic strychnine; 1-30 grain of the sulphate contains 1-40 grain of the pure alkaloid; while 1-40 grain of the arsenate represents 1-60 grain of the base.

It follows that the dose of the salts of strychnine should be greater than the dose of the basic strychnine, alkaloid, which is usually given as 1-60 to 1-14 grain. Thus, to compare the hydrochloride, the dose should be 1-48 to 1-12 grain.

Hypodermic tablet makers use the sulphate largely because of its ready solubility (partly owing to the larger percentage of water crystallization), but it should be remembered that a hypodermic tablet of 1-30 grain of strychnine sulphate contains 1-40 grain of strychnine alkaloid, a 1-60 grain tablet, 1-80 and a 1-100 grain tablet, 1-128 grain, respectively.

LACTIC-ACID-BACILLUS SPRAY IN DIPHTHERIA

In an effort to clear the throat of diphtheria bacilli in the case of a nurse (in the Rochester, Minnesota, State Hospital for the Insane) who showed no clinical symptoms of the disease, Harold B. Wood (*Jour. Am. Med. Asso.*, Aug. 9, 1913, p. 392) began spraying the nose and throat with a suspension of lactic-acid bacilli. Prior to this time diphtheria antitoxin had been given and local antiseptic solutions applied, but in spite of this treatment cultures had remained positive for about seven weeks; hence the resort to the lactic-acid bacilli, which was applied in sterile normal salt solution, with a sterile atomizer, after a one- or two-day culture on agar.

The spraying was continued for one week, when cultures failed to show the diphtheria bacillus, without subsequent positive growth developing. Because of the success of this method of treatment, it was employed in several other cases of diphtheria in which there was persistence of the organism. In every instance the result was satisfactory. With the lactic-acid tablets doubtless a solution could be extemporized. Would it not be valuable in any case of diphtheria?

RADIOACTIVE SPRING-WATER

In a bulletin recently issued by the Department of Agriculture, through the Bureau of Chemistry, the following warning is made regarding socalled radioactive mineral waters offered for sale in bottles:

"There are indications of the beginning of an attempt to perpetrate a great fraud on the American people through advertising certain mineral waters as possessing radioactivity. These waters, in some cases, are taken from springs the waters of which as they come from the ground do possess certain radioactive properties. Examination of many of these waters by the Department's specialists indicate that whatever radioactivity they possess at the spring is due almost entirely to radium emanation rather than to the presence in the water of any substance possessing radioactivity. These emanations in the form of gas quickly disappear from the water and, as a result, after the water has been bottled a short time, it will possess practically no radioactivity.

"The belief long held by many people that some mineral waters used at the springs are more effective than when bottled has been explained by some authorities on the ground that the beneficial effect of these waters is due to radioactivity. As the radioactivity disappears soon after the water is taken from the spring, any effect due to radioactivity must be lost in a short time. If the radioactivity of a water in a spring is 100, four days after bottling it will be practically nothing, compared with the original radioactivity of the water at the spring.

"The public, therefore, is warned to regard with suspicion any water advertised as possessing radioactivity. So far as the Government's specialists have been able to ascertain, no bottled water, no matter how radioactive it may have been at the spring, retains this radioactivity for any length of time."

INCONTINENCE OF URINE IN CHILDREN

When confronted by an obstinate case of enuresis in a child, all possible causative factors must be considered before attempting its alleviation; and they are numerous and diverse, as every physician knows; the first question being as to whether the trouble is an acquired one or was congenital. Among the leading physical causes, enumerated at random, are: hyperacidity or an irritant quality of the urine, calculus, phimosis, narrow meatus, ulceration or inflammation of the urethra, epispadias or other anatomical defect, tuberculosis, neoplasms, cystitis, vulvitis, anal fissure, worms, even adenoids. Psychically, there may underlie subnormal mental development or neglected training. The cause naturally must determine the course of treatment.

In a discussion of this troublesome fault in the young, J. W. Simpson points out (*Edinburg Med. Jour.*, 1913, p. 49) that incontinence exists when at the end of its third year the child is given to bedwetting in spite of all systematic attempts to correct the habit. Above all, of course, the fundamental cause must be removed, so far that is possible.

Next, in the management, come general measures designed to increase bodily vigor and to obviate possible contributive, irritative factors, in the nature of feeding and dressing, and the like. Under this heading may be named change of environment, fresh-air life, hydrotherapy, nutritive but non-stimulating food (coffee, tea, spices forbidden), plenty of water to drink in the day, but scantily or none with and after supper, emptying of the bladder at definite hours and intervals (particularly upon retiring for the night, and waking the child two or three hours later, to urinate), light bed-covering, sleeping lying on the side, and, perhaps, elevation of the foot-end of the bed and a pillow under the hips. Hypnotic suggestions.

The medicinal treatment, if at all indicated, must be systematic and extend over many months, and, among the remedies, Dr. Simpson places belladonna (and atropine) at the head; herein following Dr. Thursfield, who, though, includes potassium citrate and hexamethylenamine (urotropin), because of their influence upon the urine. Of course, the urine must be systematically tested.

When the urine is practically normal, the patient is toned up, with strychnine as the medicinal agent. After a while the atropine course is cautiously instituted, starting with minute dosage, very gradually augmented, and keeping the child just within the limits of tolerance (as evidenced by throat and eye symptoms). To be continued until absolutely cured. [While the author gives the preference to the belladonna over the alkaloid, this is exactly the time where the superiority of reliable atropine granules given to physiologic effect, can brilliantly be demonstrated. —ED.]

When the child's urine is excessively acid, loaded with urates, reduced in amount, and of high gravity, this state is overcome with an alkali citrate, and interdiction of meat. Subsequently tone with strychnine, then wind up with atropine, as described.

In the third group, where the urine is increased and of low gravity, contains triple phosphates (or, also, albumin and pus), and is of neutral or alkaline reaction, the medical attendant should prohibit, in the food, the carbohydrates, regulating the diet otherwise, and prescribe, as long as need be, acid sodium phosphate. Wind up with the atropine-therapy.

In his last group of enuresis-patients, Dr. Simpson places those in whom the urine contains bacteria. Here, if the infection is one of the pure colon-bacillus, with acid urine, he reduces the latter condition, then give urotropin; if, however, it is a mixed infection, he prefers salol, supplemented, in troublesome cases, by coli-bacterin inoculations.

While the author has given many other expedients careful trial, he reverts to his atropine-therapy as the one best and reliable resort, while rejecting, as useless, hydrotherapy, epidural injections, and hypnosis.

FREE TRANSPLANTATION OF PERITONEAL TISSUE

In order to repair the lesion incident to separating an adherent loop of the small intestine, A. Hofmann ((*Zentralbl. f. Chir.*, 1913, p. 122) resorted to the expedient of attaching a piece of the parietal peritoneum of the size of a "3-mark coin." This free transplantation proved successful, and there was immediate restitution of peristalsis.

MISCELLANEOUS ARTICLES

Hypodermic Iron: A Personal Experience

ON page 763 of the September number of CLINICAL MEDICINE, the Editor, in commenting upon some remarks by Dr. H. O. Wells relative to the use of iron, creosote, and other drugs, says: "There is no doubt that iron given subcutaneously is effective, but the pain and local reaction are often so great as to more than outweigh any advantages over internal medication."

This leads me to give the readers a little experience of my own.

A year ago last February I suffered a very severe hemorrhage, owing to the erosion of a blood-vessel in a duodenal ulcer, and was left practically bloodless. This occurred on the 17th day of February, 1912. The morning of the 20th the surgeon in charge began to administer sterile iron cacodylate, in doses of 1 Cc., this amount carrying 3 grains of the organic iron. The injections were made below and toward the inner aspect of the scapulæ, and, with the exception of a single injection, in which the nurse inadvertantly plunged the needle into the periosteum of the right scapula, I experienced no inconvenience. This happened early in the series of injections, and thereafter I received practically all injections into the left subscapular region. The only inconvenience experienced was that from the introduction of the needle-point, this amounting simply to a prick, and nothing more.

These iron injections were carried along over the period from February 20 to March 22—one month—when I was discharged from the hospital. During the last nine days, owing to the fact that I was out of bed and did not feel like removing my clothing for the afternoon injection, a double dose was administered before I arose in the morning. Even this increased amount had no ill effect.

There was so little local reaction that after an injection I was able to roll over on my back and lie there as contentedly as though nothing had happened. In the one single injection that was followed by any irritation whatever, this was not caused by the iron solution, but came from the injury of the periosteum, so far as we could determine.

The results of the injections were marvelous. When I entered the hospital, February 19, I was so bloodless that it was impossible to determine any ruby lip margin or to note any pinkness in the finger-nails. My blood count was not taken until I had been at the hospital for four or five days, when the reds ran a trifle over three million, or about fifty percent below par. The hemoglobin showed about fifty-five percent. I was operated upon on March 8, at which time the hemoglobin showed about eighty percent. At that time my blood-vessels had begun showing themselves and at times there was a slight flush in my cheeks, my finger-nails had begun to appear a slight pink and the ruby lip margin was determinable. Not only were these improvements appreciable, but I felt the stimulating effects of the iron generally.

For three or four days succeeding the operation the injections were introduced into the lower left abdominal quadrant, and the operation was considerably more painful than were those performed in the subscapular region; but, aside from the added pain of the injections, there was no undesirable local reaction. The pain incident to the needle thrust, while greater, did not linger for any considerable time and never was too severe to interfere with my pastime of reading.

Although a considerable number of doses of iron were administered in this way, there was no interference with any of my normal functions. The bowels did not become constipated, the stomach remained in good shape throughout the time I was under this treatment, and, from this experience, I believe that the subcutaneous use of the organic iron was far preferable to the giving the metal by the mouth, in any form.

The method of injecting was very simple. The iron was received in ampules, in sterile condition. The syringe was sterilized by treatment with alcohol, the needle being

sterilized by means of tincture of iodine. The skin surface at the site of puncture likewise was treated with iodine, both before and after the introduction of the needle. Although I received upwards of fifty injections, there was no inconvenience at any time, barring the one mentioned. And even then there was no abscess formation, but merely a slight inflammation, which subsided quickly; and this was traumatic in character, not septic.

It was suggested that the injections be given intravenously, but, for fear of shock, this was not done. However, from my experience with the iron administered subcutaneously, I believe that it might have been administered by the other method without much, if any, inconvenience. The cacodylate seems to be absorbed quickly and to give prompt general reaction, and, being neutral, does not act as an irritant locally.

The advantages of the use of iron hypodermically are, that thus there is no gastric irritation, no constipation; in fact, none of the objectionable things associated with the use of the drug by the mouth. And, then, there is total absorption of the entire dose, which is not invariably true when this agent is administered internally. Judging from my own case and what I have learned of others of a similar nature, I believe that this form of iron may be employed without fear of disaster, but with the expectation that invariably results, and good ones, will follow.

GEORGE L. SERVOSS.

Gardnerville, Nev.

[Dr. Servoss has given us a beautiful report. Will not others do the same? If iron should be more generally used hypodermatically we want to know it, and we want to know the best form in which to employ it.—ED.]

SCIENTIFIC RESEARCH-CENTERS OF AMERICA

A recent writer has stated with positiveness that the great medical research-centers of the world are in Germany and France. A quarter of a century ago this statement might have passed unchallenged, but today it reflects on the author's limited knowledge of what is being done in our own land.

A few years ago Sir Andrew Clark, of London, while on a visit to this country, declared that the scientific medical centers of original work would be located in America, and that in the near future medical men would come here for instruction and knowledge of the most advanced work in medicine and surgery.

This prediction already is becoming a reality in many directions and along lines that the physicians in this country have not yet recognized, because of their proximity. Much of the research in the Carnegie Laboratory, in the Rockerfeller Institute and in Johns Hopkins Hospital is far beyond anything known elsewhere in the world and has already startled the medical men abroad with the possibilities of future attainments.

In the surgical field, the clinic of the Mayo brothers has attracted surgeons, in yearly increasing numbers, from all over the world. Surgical clinics in Chicago and New York are doing fine original work, and are watched with the greatest of eagerness. Other large cities have clinics that are following, confirming, outlining, original paths. A study of the foreign literature indicates how closely many of these new fields are being followed.

There is a clinic at Battle Creek, Michigan, where the treatment of internal diseases by modern methods is made a great specialty. Here, in a great hotel-sanitorium, an increasing number of physicians is constantly in attendance as students and patients, observing and testing the most advanced appliances of hydropathy, electricity, and nutrition.

The Battle Creek Sanitarium has become a great American health-resort, equal to that of any of the famous springs of Europe, only along American lines of independent research and application of means and measures that are new. Next to the Mayos' clinic, with its army of surgeons, the Battle Creek clinic attracts the largest crowd of health seekers and students of modern medicine.

There are other institutions following the same lines, but none of them on so large a scale with exact scientific means and appliances, conducted by enthusiastic workers. The prediction of Sir Andrew Clark is being fulfilled, and physicians who are traveling abroad, looking for the most advanced work and study, come back with a conviction that much of the great world's work is being done here. The most independent students, thinkers, and writers are pressing out into the unknown, marking out new realms.

In psychological medicine, there are clinics and observation hospitals for the study of mental cases, far beyond anything seen abroad. Special studies are being made and the cumulating facts point out new and wider fields that fascinate the student of science and promise much for the future.

The late Dr. Draper, of New York, used to repeat in his lectures that in the coming time America would attract scientific students of the world and that the research-work done here would far exceed anything accomplished elsewhere; that the conditions were more favorable and the students more alert, and the Americans as a whole were more ready to apply and make practical the great truths of science.

From a personal knowledge I can assert that the surgical clinics at Rochester, Chicago, New York, and other cities are marvels of scientific technic in diagnosis, operations, and results.

The clinic at Battle Creek is equally startling in the scientific application of the great principles of therapeutic measures, so commonly known and so illy applied in the cure and prevention of disease. Persons who would know what is being done along the frontiers of science should make themselves acquainted with the work done in this country, before going abroad, and particularly before condemning our work here and praising that of other countries.

T. D. CROTHERS.

Hartford, Conn.

REMINISCENCES OF AN EX-GALENIC

Being in a reminiscent mood this evening, I thought that some of my experiences possibly might be worth setting down, for the benefit or edification of readers of CLINICAL MEDICINE.

Away back in 1891, while still the odor of the college was fresh upon me, I was located in a little town in the northern part of Nebraska, and four miles to the east there was another little town with its doctor. This other doctor we will call Dr. East, and he, despite this fictitious name, if he still is alive and reads this, will remember the occurrence.

Just a few days previous to the time of this episode a representative of a certain manufacturing firm of galenicals had passed through that section and left with each of the doctor's samples of their "plunder" (excuse the appellation), and among them were samples of fluid extract of ergot and the fluid extract of aconite.

Well, away in the night I received a call to come quickly, to help Dr. East in a case of threatened abortion. When I arrived I found a woman on the verge of collapse, and a decidedly nervous doctor sitting by the bed. I soon learned that there was alarming hemorrhage, to check which the doctor had given (as he supposed) three teaspoonfuls of the sample of the fluid extract of ergot just presented to him; however, observing some grave symptoms, he had stopped with the third dose. I picked up the bottle, to see how much of the ergot was left, when, lo! in letters as big as a barn, it seemed to me, I saw the word ACONITE. My hair raised up on end. I passed the bottle to Dr. East, and if he is dead, his face was no whiter in his coffin that it looked when he read that label.

Think of it—three full teaspoonfuls of fluid extract of aconite given in quick succession to a woman weighing less than 100 pounds! That she still was alive, one hour and one-half afterward, was a marvel. Well, we got busy and the woman pulled through, all right, and some months afterward I delivered her of a baby.

Now, had that been the equivalent in *aconitine* two lives would have been lost.

Moral: Galenicals are often quite safe even in careless hands!

Here is another. This time I was surgeon for a large coal mining concern in central Wyoming. I received a rush-call to see the wife of one of the miners, a strong young woman, 20 years old. She was only semi-conscious when I arrived and had frequent shivering-spells, with drawing back of the head and eyes upturned.

Inquiring what she had eaten, I was told that she had partaken of but very little for four days. Palpation indicated that she had a rather full stomach, and I then learned that four days ago she had eaten heartily of a boiled dinner. By the use of the hypodermic syringe loaded with some apomorphine, the boiled dinner was returned to the outer world, just as it had been swallowed; and it even was not fermenting after this four days' sojourn in her stomach.

Next case. On July 4, Mrs. A., Lincoln, Nebraska, was taken sick with symptoms very like the ones described above, and suffered until the 15th of the same month, when I was called in. I learned that on the 27th of June she had eaten a boiled dinner, and since then had eaten very little. Here, also, the hypodermic syringe with its complement of apomorphine relieved her of the gorge in eleven minutes and, in this case also, neither was the food fermented nor had it started to digest, but appeared the same as when swallowed. It was imperfectly chewed. Complete relief followed.

One more experience. A man in Creston, Iowa, about 35 years old, said he had been feeling bad all spring. The patient, when

seen on April 25, complained of frequent attacks of smothering, shaky, drawing spells during several months past. Two days after my first visit he vomited the pulp of oranges he ate between Christmas and New Year's day. Bad symptoms ceased.

Will some one please tell me how long food can stay in the human stomach without fermenting, digesting, or killing the patient?

WILL K. JOHNSON.

Piqua, Kan.

NEOSHO: THE OZARKS

All my life I have heard about the Ozarks. Those who live there seem to love them with the love of the mountaineer; the climate, productions, people, all are depicted with the enthusiasm of the Alpine dweller, whose pent-up emotion finds utterance in such bursts of emotion as Tell's "Ye crags and peaks—I'm with you once again!"

Accordingly, when we left St. Louis on the Frisco, it was with the pleasant expectation of a long wished-for experience. We would let the gusts sweep round us as we clung to the mountain cliff, draw it in with full breath and cry aloud, "Blow on, ye gusts. This is the land of liberty!"

By and by we passed Springfield and as yet had sighted no snow-clad peaks. Anxiously I inquired of neighbor passengers for the non-materializing Ozarks and was told that we were in their midst! Consulting my folder, I found that the elevations along the line ran between 1200 and 1700 feet. "Some high up," proudly announced a native. The country was rolling, without an acre too steep for the plow, pretty evenly divided between cultivated fields, mainly corn, and woodland, which was mainly oaks not over fifty feet in height. If there were ever much heavier timber, it has been cut off and the stumps have disappeared.

The soil is a red earth, plentifully plummed with stones; no soil at all being visible in many places—just stones. These are not water-smoothed cobbles or glacial drift, but apparently rock outcropping, and these shattered into angular fragments by the action of frost. Yet, in places where the plow had passed solely through stones, no soil appearing, there were stands of corn yielding 30 or 40 bushels to the acre. Yes, corn stood there 12 feet high, and well eared.

Whatever grows here, grows strong. A great fruit country it should be, and the Ozark apples and melons carry off the prizes in competitions everywhere. Yet, we see few orchards decently cared for, and fewer grapes. The famous Ozark melons are unknown at Neosho; the apples are unfit for sale, the grape vines are unpruned; the melons come from Iowa, plums from Idaho, grapes from California.

Today, September 24, we have had a week when woolen underwear has been comfortable and guests gather about the hotel stove evenings. The temperature in winter, I learn, goes below zero some 10 to 20 degrees—one man said 35 below; but I set him down as a humorist.

All about are developments of mineral wealth: Joplin, with its zinc and lead, Tulsa and other towns, with petroleum. A chunk of pure silver was picked up on the Moore tract, in the southern part of this country. Lead and zinc are found in traces almost everywhere; and as fast as one group of mines is exhausted another is discovered. Nobody likes to part with wild land, for he may be letting a fortune slip through his fingers.

The people—the old American stock, with scarcely a trace of admixture. One Greek candy-shop is the only foreign element I have discovered. Negroes seem scarce, although I am told there are some near the depot. The men are fair, with gray eyes, and usually show a questioning, chip-on-the-shoulder demeanor. Were I to recruit a company for warlike emprise, I should come here for men, sure of finding a superabundance of the best material on this broad earth, men who can ride and shoot and would welcome the call of fife and drum.

The land is backward, because the people have drifted—but make no mistake, these men have the highest possibilities in them of the true Anglo-Saxon breed. Some Illinois farmers of like stock have settled here, and their farms demonstrate what may be done with Ozark soils. The natives around them show what the incentive of example and competition can accomplish—give them the dare, and Illinois has to extend himself to keep even.

Saturday the farmers drive in and hitch about the court-house while they stop. What scenes for a kodak! Here is a scrawny old darkey on a little old ramshackle wagon, loaded with weeds, drawn by a pair of burros the size of mastiffs, their harness a patchwork of bits of rope that would hardly be received except as a "make-up." A similar wagon has six children under 8 years of age, the girls in wonderful pink sunbonnets, the others populating every corner of the

wagon, the mother holding a team of little ponies and calmly smoking a long-stemmed pipe.

The town possesses wealth and culture. Scarcely a building needs fresh paint. Many bungalows and other houses are built of strictly modern design, the use of the native stone being common and especially artistic. From one small cottage come the strains of a fine piano, the Spring Song rendered with commendable expression.

The glory of Neosho is its springs. One hotel is the Spring City, our own is the Big Spring Inn. This big spring affords three million gallons daily; and there are others. An artesian well in the court-house yard flows constantly, the water being 99.98 per-cent pure. Two sulphur springs also are here; but otherwise the water is just pure water. And this is its greatest recommendation.

Some mineral waters are purgative, others are astringent, some are chalybeate, lithic, calcic, etc. Each of them is useful in certain conditions, harmful in others. However, these pure waters of Neosho hurt nobody, and have a value, in many affections, as water alone. Here is a lady who came to this place from Boston ten years ago, to die of Bright's disease. She has kept her body well washed out by the free use of this water, and is not dead yet—or in any near peril, if one may judge by her looks and activity. Here are people with rheumatism, digestive troubles, pyelitis, valvular cardia, and other complaints. All seem to do well. I have not heard of one who has been harmed by the water here. And, yet, it is just water.

A few miles south lies a group of springs—Indian Springs. Twenty-five years ago there was a hotel, with barber-shop, stores, a hotel dealer, and a fair patronage. Today all these have disappeared, and the land is a poor, rocky farm. The springs alone remain. Within ten feet three springs well out of the cliff, each of a different taste and temperature. Several others are within a few feet. Near Neosho there are several places at which something having the appearance of crude petroleum exudes from the ground.

The town is well located, has three railroads, with good farming land around, and beautiful scenery. It is the county-seat of Newton County, and has the culture usual to country towns, which enjoy, in judges, lawyers, and so on, a nucleus of educated men. There are no saloons in the county, and in our two weeks' stay I have witnessed no drunkenness or disorder. The town is supplied with pure water from huge springs; it boasts eleven churches, four banks, good schools, a low death rate, and a population of over 4000.

Neosho is ripe for development. School census: 27 teachers, 1,762 pupils. Tax valuation: $1,083,560 (about 1-3 value); tax rate, $1.97, for state and county, of which $1.20 is for schools. Strawberries form the best crop, with apples second.

I leave the Ozarks with false ideals corrected, but with new interest in this lovely country and its fine people.

W. F. Waugh.

Neosho, Mo.

DR. LYDSTON WINS HIS SUIT AGAINST THE A. M. A.

We have just learned that the Court of Appeals of Illinois has reversed the decision of the lower court in Dr. G. Frank Lydston's suit against the trustees of the American Medical Association. It seems to be the opinion of the Appellate Court that the A. M. A. is holding meetings contrary to law, that its elections and delegate system are illegal, and that every member is entitled to a direct vote.

Unless this decision is reversed by the Supreme Court this means that for fifteen years the A. M. A. has been doing business illegally; and a complete reorganization will be necessary, this time on a thoroughly democratic basis. It seems that Dr. Lydston succeeded in getting in the courts an audience which he could not get elsewhere. Events crowd one another. What next?

SOME EASILY MADE LABORATORY TESTS

Many of the laboratory tests in diagnosis are so difficult or require so much special apparatus that the general practitioner does not undertake them himself; but this is not so with all of them. Any physician can, and most physicians do, use many of these tests with very limited apparatus.

The hemoglobin test requires but a minute. A Tallquist scale (and book) costs but little and lasts several years. Treatment of a chronic or subacute condition should not be undertaken without knowing the state of the blood, and then watching to see whether improvement follows or not. The Tallquist test does not displace the microscopic and the differential count, but supplements these.

In most of the chronic cases the blood contains only 70 to 80 percent hemoglobin. Give these patients one or two triple arsenate granules after meals and keep the intestinal tract clean; then see how quickly the hemoglobin will increase.

The Harrower test for total acids in the urine should be applied in nearly every case that comes to the physician. The total acids usually vary from 20 to 150, on the scale, 35 to 45 being considered normal. Without the test, it is only guesswork. No matter what the disease is, the total urinary acids should be definitely known. If the amount is high, the patient likely has fermentation in the intestinal tract. "Clean out, clean up, and keep clean."

If the system is highly acid, the oxygen-carrying power of the red cells is limited, also the defensive powers of the white cells is lowered. Such persons "take cold" very readily and conditions are favorable for many chronic ailments. Bring the total acids in the urine down to normal, and any other treatment you may need to give will be much more effective.

Indican will be found in the urine of nearly all people who are ill enough to come to the physician. The color reaction will vary from a trace to a deep-blue or nearly black, according to the percentage present. Look for a septic process somewhere, or more often for putrefaction (proteid decomposition) in the bowel. The test for indican with chloroform and Obermayer's reagent is so simple that it requires little time or skill to make.

The blood pressure should always be ascertained in chronic ailments, and in many acute diseases as well. A standard mercury instrument should be used, so that the result may be compared with the observations of other physicians; and the mercury instruments are considered the most accurate. There will be many surprises coming to the novice in this field. Blood pressure will vary a great deal in different people; to try to estimate it by feeling the pulse is very uncertain. Ordinary office patients will show a variation of from 100 to 200 mm. mercury, and, still, not appear to be very sick, at these extremes. A diagnosis usually cannot be made from the blood pressure alone, but it will assist in discovering early stages of chronic diseases of the cardiac valvular system and of the kidneys, and which otherwise might be unsuspected until uncurable.

A study of the blood pressure opens up a large field and illuminates many heretofore dark places. Much further research is due on this subject, but every progressive physician should be making observations and utilize, for the benefit of his patients, the great amount of work already done in this direction. Any of these tests is just as important as is the use of the clinical thermometer, and proficiency is easily acquired by any physician. Now a few illustrative cases:

Mr. E., age 35, has been sick about four months. Had been treated by a physician for "articular rheumatism." Personal history negative until he had an attack of grip, with a sore throat for months before his joints became inflamed.

Mr. B., age 70, has been sick for three weeks and bedfast for ten days. Had been under treatment for "rheumatism;" was suffering greatly. Temperature 102° F. As only one joint was involved, local infection was considered; later, a tuberculin test showed positive. In the meantime the urine test showed indican in large amount; total acidity, 90. The patient was badly constipated. Under the clean-out plan and a course of sodoxylin the patient improved about 50 percent in the next two weeks. (But the knee was kept in a plaster case for several months.) Note that, while the cleaning out of the indican and excess acids did not cure the patient, he was much improved when this had been accomplished. Now (two years later) he has a fairly good leg, except for a little stiffness.

Mr. G., age 50 years, comes for treatment for headache, the last attack, a few days ago, lasting three days. The patient looks strong and robust. Physical examination, negative. Blood pressure equalled 200 mm. mercury. Urine test: total acids, 70; indican present; a trace of albumin. The patient still is under treatment; too soon to give result. Blood pressure, 190 mm. Hg. Total urinary acids, 50; indican, a trace; albumin, a trace. Headaches are nearly gone. Sodoxylin was given, and a laxative tablet of calomel and phenolphthalein. It is difficult to get the patient to report; he thinks he is nearly well.

The joint trouble came later. Temperature, 101° to 102° F. evenings; pulse, 120. Joints are quite tender, but the patient was able to sit up. Physical examination, negative, except for hepatic dulness extending higher than normal and spleen was enlarged and tender. Urine test, negative. (I was not using total-acid and indican tests at that time.) Hemoglobin test, 30 percent. He had taken much salicylates, but without benefit.

After a month on triple arsenates with nuclein, and calomel for the bowels, the joints became well in two months. The hemoglobin test was 70 percent; it did not rise higher. Six months later he had a very bad sore throat, but was able to be up and around. The throat ulcerated badly. Another physician had a Wassermann test made at that time, which was negative. His throat finally healed, but he did not gain much strength and died within a year. He had gone south for the winter, because the cold weather affected him so much. The diagnosis made before his death was pernicious anemia.

Without the Tallquist scale I should never have suspected his hemoglobin to be so low. This would have been an interesting case for a complete laboratory diagnosis.

M. F. MINTHORN.

Castana, Iowa.

[We want to say "amen" to Dr. Minthorn's little talk about using the laboratory methods. In these days, no doctor can be really half-way successful who does not make these tests himself or have them made for him. We want to hammer that into the consciousness of every doctor—and we are trying to do this. Accurate diagnosis goes hand in hand with accurate therapy. One complements the other. To diagnose, and then fail to exhaust every effort to treat the patient successfully is a crime. So is it to try to "treat" without knowing the nature of your patient's disorder. There is more than mere "success" involved in this matter—there is a moral responsibility. Read the papers by Dr. Austin and Dr. Williams in this issue. Read them carefully. Then let's all of us "get busy."—ED.]

DRUG HABITS AND DISPENSING DOCTORS

I see the retail druggists of the N. A. R. D. are at us once more. At their convention at Cincinnati, the delegates went on record as favoring a federal law controlling the sale of narcotics and poisons, claiming that dispensing physicians are allowed to sell the same without legal restraint, and that this is a source of great harm.

Now, we know the retail druggists have not the welfare of the people solely at heart when they evolve schemes of this nature—it is the dispensing physician whom they have in mind. The purpose for their action is, to force dispensing physicians to prescribe and thus to increase their own business; in other words, it is pure commercialism with them.

I do not think I should be wrong in stating that any harm committed is entirely on their part, and not due to dispensing doctors at all. Who of the medical profession does not know of druggists who are daily selling morphine, cocaine, and the like, to their customers? Those unhappy creatures, the slaves of dope, are served with various amounts of these substances at a time, and, once known, they can readily obtain more whenever wanted. In the face of this, these sellers of drugs have the hardihood—a large percentage of them—to demand that dispensing physicians be restrained from dispensing narcotics.

I do not know a dispensing doctor, nor do I think that one exists, who sells habit-drugs by the dime's or quarter's worth. More than that, they do not sell such narcotics at all; they administer them when necessary, and when needed they are, of course, included in the prescription. But as to selling such drugs in the way the druggists infer, never—no, never! Such a physician would be shunned and condemned by every decent doctor in America.

And, again, were it not for druggists selling narcotic drugs, we should have no drug-fiends; because they would be unable to procure them, unless it would be now and then through some wayward druggist or physician, the latter being the only persons able to procure them.

But it is plain why they are attempting to do this thing: it is to get prescriptions from those who now are dispensing their own drugs; a thing, though, they will never accomplish, for the reason that these same doctors dispense, not principally for profit, but for other very good reasons, one of which is that they cannot always rely upon strict adherence to the prescription, and also because the dispensing doctor usually is a good man with a heart, a man of sympathy, who knows the economic burden which sickness involves.

And, furthermore, a dispensing doctor can, many times, administer the necessary drugs (in cases of great urgency) and watch results before leaving the bedside. Whereas, if he prescribed, it would be from one-half to three or more hours before the patient could receive a dose of the medicine—time enough elapsing to change the condition of the patient, time enough, often, to render the chances hopeless; whereas, if the proper remedies had been

administered at the proper time the patient would have been saved.

Thus, for numerous reasons, not forgetting the good of humanity, the dispensing doctor should be preferred.

R. WILLMAN.

St. Joseph, Mo.

[As to whether any doctor should dispense or prescribe we do not undertake to say. This is a question which every doctor must answer for himself—and we can safely leave it to the average physician to answer it honestly and conscientiously. His location; the character of the druggists upon whom he must depend; the financial status of the people among whom he must practice; the character of his professional competition; the custom of other doctors as regards dispensing or prescribing; the proportion of town and country practice—all these things, and many others, must be considered.

The one factor, however, which should always be kept in mind, is his duty to his patients. This should be placed above everything. If he can serve the sick best by dispensing—and he often can—let him dispense; if he can get best results by prescribing—and frequently he can—then he should prescribe. But—*nobody can decide this matter for him but himself.* Certainly the druggist cannot. It is for this reason that every doctor with red blood in his veins should resent and oppose the efforts of any man or any class of men to tie his hands, interfere with his professional liberties, and by so doing limit his power to do good. Whether *you*, doctor, dispense or prescribe, you must see that this is so. The whole medical profession should be a unit in defending this principle. Far more is involved than the lessening dollars for the doctor and the increase of profits for the pharmacist.

Right now there is a bill pending in Congress (H. R. 6282) to restrict the sale of narcotic drugs. It is a good bill; it was passed by the House of Representatives; it has been indorsed by all branches of the drug trade, by the official representatives of the A. M. A., by the veterinarians, and by the administration. It was opposed by the N. A. R. D. at its Cincinnati meeting *principally* because it did not put oppressive burdens upon the dispensing doctor.

Are you doing all that you can to secure the passage of this bill? Have you written to your representatives and senators urging its immediate consideration by the Senate, just as it stands? If you have not done so, attend to the matter at once. The bill the druggists are endeavoring to have passed would deal you a terrific blow if it became law. What are you going to do about it? Nothing?—ED.]

DEATH OF DOCTOR WILLIAM J BRADLEY

We regret greatly to learn of the decease of Dr. William J. Bradley, of Cedar Rapids, Iowa, who died of typhoid fever on October 2. Dr. Bradley was born in Berrien County, Michigan, in 1866, graduated from Rush Medical College in 1890, and after practicing in Illinois for several years, located in Cedar Rapids in 1902, where he built up a large practice. He was a warm friend of the active-principle movement in Iowa, and left a horde of friends to mourn his loss.

HOW TO SECURE RELIABLE DRUGS

While we are discussing the right of the physician to dispense or prescribe, as he may prefer, it will be interesting to read the following letter which was published in *The Journal of the American Medical Association*, October 11, 1913, on page 1392. Dr. Howe has presented this matter clearly and impartially and in a way which we are sure must appeal to every fair-minded man. His position is our own exactly.

To the Editor:—The recent article by M. I. Wilbert on "Carelessness in Pharmacy as a Reason for a Restricted Materia Medica" (*The Journal*, July 19, 1913, p. 189), very truly sets forth the complications and drawbacks incidental to the evolution of the modern drug-store. As a general emporium for all sorts of small wares and ready-made medicines, for confectionery, cigars and fancy articles, it may be a social necessity as stated, and undoubtedly is so. With the further elaborations of the soda-fountain, the tables for ice-cream customers and the great amount of profit secured along these lines, it is no wonder that the careful compounding of pure drugs should be the smallest element of the business and consequently become neglected.

Mr. Wilbert in his article suggests reform of the drug-store, but specifies shops devoid of "side lines" and equipped with the necessary analytical apparatus. A few such shops still exist in the large cities, but they are so distinctly in the minority that they can exercise but little influence to benefit the general public. The attractive profits of the "side lines," are so great that they carry almost all druggists with them, and, so far as I can judge, the careful handling of drugs is more and more neglected.

A further difficulty arises from the fact that a drug-store supplying the patients of a number of physicians has to include in its stock the favorite

drugs and combinations prescribed by each of them—some of these rarely called for. With our large pharmacopeia and the great variety of products of the manufacturing chemists, to say nothing of the legion of nostrums, the druggist may well feel bewildered.

The suggestion of Mr. Wilbert that physicians should "take an active interest in evolving a restricted or preferred materia medica list" is certainly desirable; but when one druggist serves a half dozen or more physicians, it may be rather difficult to get them all to keep step in this movement.

Altogether, it must be confessed, the preoccupation of the druggist with his so-called "side-lines" and the demoralization of the trade and the public with nostrums make the reform of his business exceedingly difficult. Doubtless it can be accomplished in certain instances under the personal influence and direct supervision of the physician, but in other cases it is practically impossible.

This condition of things is particularly unfortunate for the physician. He is responsible for the life and welfare of the patient and many times pins his faith on the activity of a single medicine. Should this remedy be unreliable or wrongly compounded, or should successive fillings of the prescription vary in activity, both the physician and the patient may suffer.

The matter of reliable drugs is so extremely important that any physician who is unable to obtain satisfactory service from druggists in his neighborhood is justified in supplying his own drugs.

More than twenty years ago I was in the position which I have just indicated, and in justice to my patients adopted the method of providing and dispensing my own medicines. Although I began this with many misgivings, it has worked exceedingly well. Carefully choosing the sources of my drugs and repeatedly testing their clinical efficacy, I can expect definite results from them. The patient gets the first dose promptly, usually before my visit is ended. Thus many uncertainties are avoided. The practice of dispensing does away with the unauthorized refilling of prescriptions and with the annoying habit which many patients have of lending them to their friends. The time required to keep my stock in order is not so great as I supposed it would be. It proves to be well spent, for it is closely interwoven with the art of medicine, in that it familiarizes me with the appearance, taste and other physical properties of my remedies. The expense in my hands has never exceeded 3 percent of my total receipts from practice. The method produces the greatest economy of material and of expense. It is interesting to find, after twenty years' use, that dispensing medicines has not led me to resort to the use of the ready-made nostrums or "shot-gun" formulas. Examination of my hand-bag today shows that out of sixty-three medicines which I habitually carry, forty-seven contain only a single ingredient. The use of alkaloids and of the tablet form of medication greatly facilitates the carrying of medicines, and many tablets can be dissolved and given in liquid form if desired.

I do not wish to be understood as advocating that all physicians should dispense their medicines. Such a course would be unjust to some druggists. The well-equipped and conscientious druggist who has a high standard of work and lives up to it should be encouraged. On the other hand, I firmly maintain that no physician should jeopardize his patients or his own reputation by relying on a prescription service which he knows to be poor. He should, if necessary, provide and dispense his own medicines.

OLIVER H. HOWE, M. D.
Cohasset, Mass.

SODIUM HYPOSULPHITE IN THE TREATMENT OF HEMORRHAGIC MALARIAL FEVER

I am delighted to read in CLINICAL MEDICINE Dr. Johnson's very interesting article on sodium hyposulphite. I have long regarded it as one of our most useful drugs and a real boon to one practising in the land of malaria and the "yellow janders." Dr. Johnson calls for the experience of his medical brothers, and I will give mine.

Over ten years ago, I was called to a case of hemorrhagic malarial fever. I instituted the treatment given in THE ALKALOIDAL CLINIC by an old practitioner living in the bottom lands of Louisiana, where the disease was very prevalent. Being remote from any town or other M. D.s, he was thrown on his own resources, and he developed this treatment, and found that it met all the urgent demands of numerous cases. He was of the opinion that the malaria-poison had "knocked out" the action of the liver, the bowels, and the skin, and that their work had been put vicariously upon the kidneys; and these organs, in their effort to perform this quadruple work of secretion and elimination, were so severely taxed and overworked as to produce the hemorrhage that gives the distinctive name and character to this dreaded fever.

This old doctor summarized his treatment and condensed its principle into these forceful words, "Flood the sewerage;" and to this end, he recommended the giving of calomel, podophyllin, jalap, and leptandrin, a combination of four of our very best chologog cathartics, then to follow with tablespoonful doses of a saturated solution of hyposulphite of sodium every three hours to brisk purgation. To check the hematuria, spirit of nitrous ether, 1 dram, and oil of turpentine, 20 drops, were given, in water. This dose to be repeated according to circumstances—*pro re nata*. This treatment gave me the most entirely satisfactory results of any that I ever gleaned from a medical journal.

According to the father, my patient voided a gallon of bile by vomiting and by stool. I continued the hyposulphite for several days, although improvement was rapid from the first day. The hematuria promptly

ceased and the chills and lemon-jaundiced hue disappeared. The hyposulphite acted in the most entirely satisfactory manner, and took the place, and filled the office, of quinine.

This Louisianian asserted that quinine would increase and aggravate the hematuria, and that the hyposulphite would destroy the malarial parasite as effectively as quinine, without disturbing the function of the kidneys.

So thoroughly was I myself convinced of this fact of the pernicious effects of quinine, both from previous abundant gleanings from writers in medical journals as well as from the relations of practical bedside experience of physicians of my own acquaintance, that I did not venture to give this patient any quinine for three days, and then only in small doses.

Then, under the use of quinine, iron, arsenic, strychnine, and hypophosphites, I had the great pleasure of seeing my patient restored to rosy, robust health, which he has continued to enjoy to this day. I sent him out of the malarial belt as soon as convalescent, and I think it is the right thing always to do in these cases.

Since this experience, I have frequently prescribed sodium hyposulphite for the sallow, semijaundiced condition of the subjects of chronic malaria, associated with anemia, puffed bowels, debility, and listlessness, and with very excellent results. In giving it, I had these three points in view: (1) That it will destroy the malarial parasite in the blood. (2) That it will act on the liver and the bowels. (3) That it will act as an antifermentive and also as an antitoxin.

Locally, sodium hyposulphite is a valuable application to soothe and relieve skin eruptions.

But, as Dr. Johnson says, the salt has a most disagreeable taste, and on this account it is difficult to get patients to take it. One of my lady patients almost exhausted her vocabulary of adjectives to describe how vile it tasted to her; but I have never known one who had a more sensitive perception of taste of the disagreeable than she. The most of my patients have not rebelled against it. I heartily join Dr. Johnson in his wish that some wizard of a pharmacist will soon give us a palatable form for dispensing this very valuable drug.

Dr. Sparkman, of Georgetown, South Carolina, uses the hyposulphite very successfully in hemorrhagic malarial fever and exhibits it in solution in cinnamon water. I do hope some may have tested as to whether calcium sulphide is equally as effective and can be substituted for the hyposulphite.

Let me add—do not accept the advice, "Don't give calomel, in hemorrhagic malarial fever, but give quinine." Reverse this, and you will be right. Quiet the patient with a hypodermic injection of morphine, and give calomel in 20-grain doses every two hours till the bowels act freely. In addition, support the vital powers. The hemorrhage will cease when the liver acts fully.

L. B. BATES.

St. Matthews, S. C.

THOSE PRIZES: A WORD OF EXPLANATION

In the June number of CLINICAL MEDICINE we offered several small prizes, ranging from $3.00 downward, for the best brief therapeutic articles or "items" upon the treatment of the summer diseases. Doubtless many of you will wonder why we have failed to make any awards as yet. The reason is that we have *not* the wisdom of Solomon. If we exclude the longer articles (which should properly be excluded from the competition) there is no possibility of making a choice from the expressions of opinion sent us from our subscribers. As the easiest way out of a difficulty we have, accordingly, advanced the subscription of every contributor to this symposium who has made a good showing—as most of the contributors most assuredly have. The writers of the leading articles were not considered eligible to the competition.

Without regard to prizes won't every interested reader of this item now "get busy" with something therapeutic to help us all in our struggle with winter-month diseases? Here are a few good subjects:

Whooping cough.

Senile bronchitis.

Rheumatoid arthritis.

Rheumatism—acute or chronic.

Coughs—all kinds.

Sore throats—not forgetting diphtheria and croup.

Measles, scarlatina, and other eruptive diseases.

Asthma. (We want more about asthma; it's a puzzler.)

Influenza.

If you do not like these titles pick out something that suits you better. But write about something you know; make your talk a practical one, thinking of the other fellow;

and "cut it short." We need more of this brief, pointed, pithy stuff. Brother, you can help. Are you doing *your* share?

NERVE ANASTOMOSIS (THE MUSCULOSPIRAL NERVE)*

The patient to be operated upon today is the man who came before the class yesterday; a Frenchman who suffered a very severe accident on August 2 of last year. While he was attempting to place a belt on a wheel the latter began revolving at the rate of 300 revolutions per minute. The belt caught in the set-screw and entangled both arms of the patient in such a manner as to mutilate the right one, necessitating an amputation four inches below the shoulder; the left presenting an oblique and longitudinal fracture of the humerus. It is now three months since the accident occurred and we find his arm is practically useless because of musculospiral paralysis, the nerve having been encased in the bony lesion. The object of the operation is to restore the function of the arm.

Before the patient is brought into the operating room, let us discuss briefly the anatomy and physiology of the musculospiral nerve. You will recall that it is one of the terminal branches of the posterior cord of the brachial plexus, receiving its fibers from the sixth, seventh, and eighth cervicles. After passing behind the axillary artery and in front of the latissimus dorsi and teres major, it enters the musculospiral groove, passing around the humerus between the inner and outer heads of the triceps. When it reaches the lateral aspect of the arm, it passes between the brachialis anticus and the brachioradialis, dividing into radial and posterior interosseus on the front of the external condyle. Before the nerve divides into its terminal branches it gives off the internal muscular branches to the inner and middle heads of the triceps; the posterior muscular, to the triceps and anconeus; the external muscular, to the brachioradialis, extensor carpi radialis longior, and outer part of brachialis anticus. It also gives off an internal cutaneous branch to the posterior aspect of the inner half of the arm and a cutaneous branch to the posterior surface of the radial half of the forearm as far as the wrist. The musculospiral supplies the extensors and supinators of the forearm, wrist, and phalanges.

What are the points of interest in this case that will enable us definitely to locate the lesion? By bringing the forearm down beyond a right angle, there is slight power of extension. Supination, when the arm is extended, is entirely lost; slight supination, when the arm is flexed. The patient also exhibits complete wristdrop, with loss of extension in the phalanges. Sensation on the posterior aspect of the arm is normal. There is hypersensitiveness over the outer half of the posterior surface of the forearm, which indicates neuritis. There is also complete loss of sensation over the distribution of the radial nerve.

Now let us locate the lesion. He has slight extension of forearm and unimpaired sensation on the posterior aspect of the inner half of the arm, because the lesion is below the point from which these structures receive their nerve supply. The lesion is also below the origin of the nerve to the posterior surface of the outer half of the forearm. Sensation over this area is not lost, on the contrary, it is hypersensitive. The nerve is caught above the branches to the supinators, because the function of these muscles is destroyed. When the arm is flexed, the patient exhibits slight supination, because in that position the biceps performs this function and it is supplied by the musculocutaneous nerve. Thus we are able to locate definitely the lesion between the internal muscular and cutaneous branches above the elbow and the bifurcation of the main trunk into the radial and posterior interosseus.

I am now making an incision along the inner border of the brachioradialis muscle. The white line now comes into view. It is the intermuscular septum between the brachioradialis and the brachialis anticus. With the handle of the knife I am separating these muscles. At the bottom of this septum the nerve should come into view, but it does not. I will now lengthen my incision above and below this bony enlargement and search for the points of entrance and exit of the nerve. Here is the nerve entering the bone some distance above the external condyle.

We will now chisel away the bone to see what has become of the nerve. This enlargement is very hard; I expected to find it somewhat softer. The nerve seems to be destroyed soon after entering the bone. It will be necessary to fill in a gap of two inches where there is no nerve-substance. Passing the blade of my knife throught the center of the proximal portion, about one-eighth of an inch from the distal end, I divide the nerve longitudinally for more than two inches. We will now reverse this segment and suture it

*Clinic given before the students of the American Medical College, St. [illegible].

with fine silk to the distal portion just above the radial and posterior interosseus.

Now you may see that I have carried the nerve away from the bone and am suturing muscle and facia under it. I do this in order that the nerve may not again be encased during the process of repair. Before I close the skin incision, you may see that the nerve instead of running through the groove, next to the bone, is practically subcutaneous. We shall now put this arm in a right-angle splint, leave it for four weeks, then give it passive motion and massage.

What is the prognosis in this case? We expect to have a complete restoration of function. It has been demonstrated to the satisfaction of the profession that the function of a divided nerve can be completely restored, even though it has been separated for a long period of time.

But we must not overlook the factors so essential to success, namely, it must be one of those nerves that possesses a regenerative membrane, the neurolemma. The axis-cylinders must be accurately adjusted without the interposition of connecting tissue. We must have perfect asepsis.

The foregoing repeats the remarks made at the surgical clinic held November 12, 1912, in the presence of the students of the Medical Department of the National University.

On January 28, about three months after the operation, the patient again appeared before the class. Sensation over the affected area was entirely restored. Extension and supination of the forearm were complete. There was no wristdrop. Extension of the fingers was still slightly impaired, but rapidly improving. This case illustrates the rapid regeneration which takes place in a cerebrospinal nerve.

J. D. HAYWARD.

St. Louis, Mo.

DEATH OF DR. TORGNY ANDERSON

Many of the old subscribers to CLINICAL MEDICINE will remember Dr. Torgny Anderson, a Nebraska reader of this journal, who from time to time contributed some clever cartoons on medical subjects. Several years ago he lost a foot through the explosion of a gun and his health was completely shattered. He returned to his native country, Sweden, and died there on September 19, last. He was an able man, a warm friend of the alkaloidal movement, and a devoted reader and contributor to the old CLINIC. We extend our earnest sympathy to his family and friends.

Is there a medical journal in the world which is as rich in its friends as ours? We believe not—and we are earnestly trying to deserve them.

IODINE: A FINE SERIES OF PAPERS

The Medical Standard, in its October issue, has an interesting symposium on "Iodine," appearing in its Round Table Department. Every reader of CLINICAL MEDICINE should see this number. Send ten cents for a copy to *The Medical Standard*, 535 S. Clark St., Chicago, Illinois.

COPPER SULPHOCARBOLATE: REPORT OF CASE

On Friday evening, September 5, 1913, I was called to attend a baby-girl—19 months old. Her pulse, I found, ran 120, her temperature was 104° F., the abdomen was distended and tender, and she was passing green, ill-smelling stools in which there was much blood and many shreds of mucous membrane.. The child had been under the care of another doctor for nine days, and he had prescribed equal parts of castor and olive oil, every other night, and morphine or other opiates between times.

I began administering calomel with aromatics immediately and followed with copper sulphocarbolate, 1-64 grain in solution at hourly intervals. Nothing else was given, except cold sponge-baths, to allay the fever; and they were very effective. Owing to the morphine effect visible when first I saw it, the child was drowsy and took but little interest in its surroundings; but within twenty-four hours after beginning with the sulphocarbolate, the morphine meanwhile being eliminated, there was a marked change. The bowels showed less tenderness, the abdomen became soft, and the character of the stools changed. The sulphocarbolate was continued, in the original dosage and at hourly intervals when the patient was not sleeping, until the afternoon of Thursday, September 11, when the interval was lengthened to three or four hours.

At the date named the bowel discharges were absolutely normal in every way, there being but one or two passages in twenty-four hours, and these odorless and formed. As there was considerable loss of vitality, the patient, from Tuesday, September 9, was

placed on 2-minim doses of nuclein, given at intervals of two hours, with the result that the child's condition in general showed marked improvement.

As no medicine other than the copper sulphocarbolate was given from Friday night till Tuesday afternoon of the following week, I have every reason to believe that this agent had the effect of bringing the condition of the child to normal. The diet in this case consisted of albumen-water from the time the patient came under my observation until Tuesday afternoon, after which she was given the white of a "coddled egg" three times a day, in addition to the albumen-water between meals.

This was a case in which the other doctor told the parents that, in the event the morphine mixture failed to stop the diarrhea and relieve the other symptoms, he had exhausted himself in so far as bringing about a satisfactory termination was concerned. He made no effort to remove the cause, but rather, through the administration of opiates, locked up the bowels and the pernicious organisms present. With the removal of the latter, the change for the better was remarkable, and, with their further inhibition, through the agency of the copper sulphocarbolate, a satisfactory termination was reached, and that within six days after my first call.

Had this child been treated in like manner from the start, it is more than probable that the sickness would not have extended over more than a few days at the utmost; for identical cases coming under my observation have submitted within a very short time to the clearing out and cleaning up of the bowel. Copper sulphocarbolate, in identical cases, has given me satisfactory terminations within forty-eight hours, in several instances.

In order that results may be obtained, this copper salt must be pushed—and pushed hard—from the very beginning, and kept up until its full effect has been demonstrated by the return of normal stools. I have found that when this is done there is but little need of the use of any other remedy, as the placing of the bowel in a normal condition, and that quickly, suffices to allay other symptoms. The case reported was diagnosed as an enterocolitis with ulceration.

GEORGE L. SERVOSS.

Gardnerville, Nev.

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[We have long known that the copper salts are highly destructive of certain forms of vegetable life—the algae of stagnant water, for instance—and we hardly need say anything about the value of copper arsenite, which many readers of this journal have used with good results in the treatment of the summer diarrheas of children. Everybody who has tried them knows what the sulphocarbolates will do. Putting two and two together, copper sulphocarbolate *should* do in many cases just what it did for Dr. Servoss in this instance. We beg other readers of CLINICAL MEDICINE to try it and report results.—ED.]

WHO USES THE METZ AUTOMOBILE?

Dr. Samuel P. Shelton, Brunswick, Mississippi, wants to hear from any of our readers who are using the Metz automobile. He wishes to know how it compares with other machines of about the same price. We shall leave it to the "family" to respond.

OBSTETRIC PROBLEMS

When a physician is notified about a pregnancy, if the patient is a stranger, he should go at a conveniently early date for the purpose of (*a*) forming an acquaintance, and (*b*) noting conditions (age, temperament, form, habits, family history, etc.), and of outlining the management of the first four months, such as caution about traumatism, emotion, and the treatment of nausea. He should at the same time request a prompt notification of any abnormality, such as excessive vomiting, hemorrhage, constipation or migraine.

The care and completeness of this first visit usually obviates anything more, in the management of the first half of pregnancy, than an occasional visit of the patient to the doctor's office, although not always. A test of the urine is an indispensable essential whenever we are engaged in a new case, although, as relating to the first half of an average pregnancy, I have found it almost always negative; but throughout the latter half the urine should be watched closely, and especially so if emunctory symptoms indicate it.

It is a mistake to leave the impression upon the patient's mind, or her relatives', that her condition is anything but simply a natural one. Keep her as far as possible away from the notion that she is in a dangerous situation. This goes a long distance toward making for yourself a successful accouchement, for it has long since been proven that mental impressions affect ten-

fold worse the mother's physical condition than they ever injure or deform the child. Kind suggestions, from time to time, concerning diet, dress, coitus, and so on, may be necessary, as well as requesting the husband to make her as cheerful and jolly as possible without indulging her too much in fancy foods and drinks.

From the beginning of the latter half of gestation and increasing toward confinement, the doctor should never neglect to note the patient's progress; carefully noting any symptom of deficiency either in nutrition or excretion; also, as the term advances, satisfy himself about the child's position. It is now, also, that his suggestions offered as to dress should be made more explicit and mandatory.

Insist that all her clothing be suspended from the shoulders, save the abdominal supporter and the hosiery. Advise her to continue physical exercise in keeping with her strength and other indications, and especially not to seclude herself into misery because of her appearance. It can be nothing but detrimental for her to remain shut up in jail, as it were, for four months before confinement. To this very disposition in some women may be ascribed invalidism and even deaths. It induces lethargy of secretions and excretions, of muscular tone, and of organic functions generally; and it introduces that mental specter, "dread," the bane of those anticipating any physical ordeal. Direct a simple but a plenteous, nutritious, easily digestible and assimilable diet, and abundance of pure water. Give instructions about baths, especially the warm twenty-minute sitz-bath, which should be indulged in every other night for three weeks before confinement in primiparas; less by one-half for multiparas.

Thus we have touched along up to labor, the absorbing incident anticipated by at least three anxious individuals (usually many more)—the patient, the husband, and the doctor.

The lying-in chamber, next, should be a well-lighted, cheerful, and well-ventilated front or other prominent room, never the family "sick-room"; and it should be furnished plainly, but as tidily and conveniently as possible. The bed should be, when possible, of the hospital type—low head- and foot-tops, with a sanitary cotton mattress on an improved link-and-coil metal-frame spring. (This is the best spring, in the writer's view, because of its nonsagging quality and easy firmness.) Over the mattress should be spread a thickness or two of paper carpet lining (clean, of course), and on top of this the rubber sheet (a piece of new oilcloth is good), and over that a clean heavy sheet. Then fold another clean sheet, placing the single top end under the pillows and the folded lower portion under the shoulders. The under, or heavy, sheet may be folded back down under the shoulders also, which will facilitate its removal later. Use as many pillows as the patient wants.

When labor is completed, remove the rubber and the heavy sheets, and bring down the clean folded sheet from beneath the shoulders. The paper covers should remain as absorbents for a day or two. The patient should be allowed to choose the amount of bed-clothing over her, but everything must be clean. One sheet usually suffices until the third stage has suddenly passed into the puerperium, when more covers will promptly be called for. As soon as possible after all the particulars about mother and babe have been completed, the doctor should cleanse and inspect the mother, and direct the removal of the soiled bedding, bring down the clean sheet, apply the firm, smooth, snugly fitting abdominal binder (which should reach from the trochanters to the ribs) and then order the nurse to sponge off the patient's chest, arms, head, and neck, and particularly the breasts.

And now, when also the newborn babe's toilet is complete, it may be allowed to try its syphon instincts, as this accelerates uterine contractions; and often they are beneficial after a prolonged labor, when it is that the womb does not quickly close up on the bleeding surfaces.

Thus far we have touched upon the physiologic treatment of the normal pregnancy, so let us review briefly the indications for therapeutic measures as they occur to us in the various paragraphs of this article.

Nausea and vomiting of pregnancy are physiologic in most cases, that is, due to normal physiologic changes; but they often assume a pathologic state bordering upon perniciousness. A case in the writer's practice may illustrate at this point.

A slender, 18-year-old, brunette wife, in her first conception, developed a stubborn, incessant vomiting almost immediately afterward. She was given minute-dose calomel, followed by mild saline laxatives till purgation. This treatment covered two days. She remained weak and in bed for seven days, when the vomiting returned with all of its former stubbornness and continued for

fourteen days, during which time she did not retain any food or drink. The treatment of this attack was: Calomel, 1-10 grain night and morning; ingluvin, bismuth, cerium oxalate, ipecac, nux vomica, and a few others, at various times and in varying doses, but seemingly without beneficial effect. The case grew alarming because of threatened exhaustion. The last expedient used in this attack was an ice-pack over the epigastrium. The vomiting finally subsided, and we discussed the question of abortion in the event it should return.

After a rest of one week, vomiting again set in. The morning dose of rochelle salt, I may state, was continued throughout the interval. The ice-pack was again used, but this time without avail. Heat was substituted, supplemented by counterirritation over the vagus, and ice to the spine, while the cervix was cautiously mopped out with a solution of cocaine and aconite. None of this relieved the vomiting, although they were persistently used for another week.

At the end of the time named, Harkin's method of vesication over the fourth and fifth dorsal vertebras was resorted to, when, within six hours, every symptom of nausea had disappeared, and the woman asked for some "parched corn" (with apology to pellagra specialists), which was given her after being well ground in a coffee mill and mixed with milk. She ate it with a relish, retained it, and went on to term with no more sickness. Her baby was born without incident, was of normal size, and without a blemish. The placenta was small and the cord fourteen inches long. She made a good recovery.

The foregoing case was unique because of the seven-day recurrence, the absence of any alimentary or renal disease, and the patient's appetite for the "parched corn." Since then I have seen several aggravating cases of excessive vomiting of pregnancy relieved by the "parched corn" alone; however, we cannot yet claim any specific for this ailment that ranks with those for some others ("606," for instance).

As a rule, the suggestions given at the first visit, namely, those relating to mental occupation, inhibition of or abstinence from sexual excitement, and careful observance of other physiologic laws and processes, will go further to obviate this condition than almost any other therapeutic regimen. For the morning-sickness of multiparas, Fowler's solution of arsenic, in 1-2-drop doses every half hour for five or six doses, is an excellent remedy, as are also the milder arsenates, given, as tonics, at intervals throughout the period of gestation. This seems to exert a beneficial effect upon both mother and child.

The kidneys, in pregnancy, must perform, together with the other emunctories, an increased amount of work. This, in the first half of the term, is due to vasomotor changes through the sympathetic system, in which hyperemia of an organ, or of a part, has the effect of relaxation—i. e., vasodilatation—upon tissues supplied through nerves of that system in other parts; hence, the kidneys, working under higher pressure than any other organs of the body except those of the brain, exhibit changes almost simultaneously with the brain, and probably of the same character.

The kidneys being an excretory, furnish us diagnostic material, through the sewage, by means of which the higher organ may be successfully treated. While all of the physiologic processes that produce the sympathetic changes in these two organs are better studied in connection with those of the liver, the heart, and other organs, we may, even then, not fully comprehend them; still, we already are sure of the effects of the cause. In other words, we know it to be a toxemia, with its dismal train of symptoms: albuminuria, anasarca, nervous disorders, gastric derangement, uremic convulsions, coma, and, in the end, death.

The conditions thus presenting themselves to the medical attendant suggest the treatment: unload every tube of the body of its contents; and this may be done by osmotic (exosmotic and endosmotic) means, through the employment of hydragog cathartics, diuretics, diaphoretics, in connection with stimulants and supportives.

The hydragogs include the laxative salines, the mineral and vegetable salts, alkaloids, and fluids; any of which should be chosen that are expected to act quickest without endangering mother or child. The diuretics may be given simultaneously with the purgatives or separately when incompatible; but they are imperatively demanded and should not be delayed. Diaphoretics are seldom contraindicated where conditions necessitate the immediate use of the other two depletives, and, hence, may be given at the same time, especially if topically administered (as the hot bath, hot-pack, vapor-bath, or hot air from a spirit-lamp conveyed through a long-tubed funnel inserted beneath the bed-covers).

Familiar with all purgatives and diuretics, as we are, I shall enumerate only those from

which we may expect best results, to wit: Pulvis jalapæ compositus, 30 grains, repeat if necessary. This should be assisted by potassium bitartrate, 1-2 to 1 ounce daily, to keep up free hydragog action. With the latter may be combined infusion of digitalis, both of which are our best diuretics. (Jaborandi—or pilocarpine—should not be used, in this condition, except in sthenic individuals.)

In this condition we must interdict the frugal diet, but not the copious use of water. Milk is probably the best single food, until the severity of symptoms have passed, then gradually lead up to more substantial alimentation by admitting, a few at a time, some of the blander foods (oatmeal, rice, soups, etc.) But it is the part of wisdom to forbid all meat until every symptom of the trouble has disappeared.

The treatment of eclampsia occurring before delivery differs but little from that during or after it. In all cases occurring before, one should be prepared to see a return during or at about confinement—certainly, and make preparations for it. Here is an illustration:

A stout, young, freckled woman, whom I had never seen, who was alone with her two little boys when she had to take to the bed, and sent the children three miles after me. Upon my arrival she was so hoarse that she could scarcely speak, while her face was puffed out of all proportion, as was also the entire body. She said that her health had been good up to a few weeks back, when that swelling set in. Naturally I was unprepared to encounter such a situation, and had to do the best I could under adverse circumstances, not even a neighbor living within reach. Quickly resolved, I promptly and without accident delivered that baby. Of course I had to do everything connected with the job, which required about three hours. Before I left, the woman took the baby in her arms and remarked that she would name him for me. This was about 5 p. m. Near the same hour next morning her husband came hurriedly for me to return with him, stating that his wife was "having spells."

Arriving, I found her in a violent convulsion, even worse than I had anticipated on the day before. She was given a chloral and bromide enema, chloroform anesthesia until relaxation was induced, and then the eliminants as outlined above were resorted to. She did not regain consciousness until noon on that day, and when she did, I could not make her remember anything that occurred the day before. She wanted to know whose baby that was, and nothing could recall to her mind a single incident of the day before, although she directed me to find the bed-clothes, child's clothes, soap, and everything I asked for; seemed perfectly rational, and has remained so ever since. But she has never been able to recall anything of that particular afternoon. My unprepared "fix" on this occasion taught me a valuable lesson—never to be unarmed when the devil comes.

Convulsions may occur without visible premonitory symptoms any time during pregnancy, confinement or early in the puerperium. An attack during labor is indication enough to hasten delivery, but not at the expense of neglecting the mother's treatment at the same time; she can be served by the attendants while the doctor works. The treatment as here outlined is applicable to the condition arising any time, and has proven the best in my experience, although I am always glad to discover a better one, and the hope of doing so makes me vary the remedies used, every now and then.

So far as my personal experience is concerned, ergot has a very limited indication in the entire field of obstetrics. Strychnine has fulfilled them all without the danger attending ergot when administered to certain individuals. Being a powerful arterial astringent, I have seen varicose veins of the flaccid abdominal walls follow its administration, and in cases of severe effort (such as that attending labor, vomiting or eclampsia), two deaths from apoplexy, which were directly ascribable to its action, having followed within one hour after the dose that had been given before my arrival. I could not ascertain the exact amount of the dose given. Its indications are but two in this field, namely, to hasten expulsion of the uterine contents, and to control hemorrhage. If given in sufficient quantity to produce either result, this is accomplished through the toxic action of the drug upon the unstriped muscular structures; and that is always attended with more or less danger. I have seen one case of rupture of uterus follow a dram-dose given to a primipara after a prolonged, incomplete labor, and when Bandl's ring could easily have been detected by the attendant.

The hypodermic injection of morphine, if given earlier than one hour before delivery, will show its effect upon the child, the same being born in a more or less narcotized con-

dition and often difficult to resuscitate, sometimes even being beyond resuscitation.

As an anodyne, chloroform whiffs are far superior in the first stage, and carried to anesthesia, if necessary, during the second. But here, too, is where cheerful faces and words of encouragement and praise for the patient will exert a remarkably salutary influence in overcoming her terror and suffering, and, moreover, will leave no trail of the serpent in their wake.

Morphine induces insensibility to pain, but hinders no pathologic process creating it. Its physiologic action is (*a*) stimulant, (*b*) intoxicant, (*c*) analgesic or anodyne), (*d*) paralyzant, (*e*) antibiotic. It is the one remedy most readily obtainable by the tyro, which is responsible for so many dope fiends —and they are legion. It is the one proud possessor of the power to create any ailment that would indicate to the inexperienced, unsuspecting, honest doctor its immediate and liberal use.

So, let us discard morphine as a remedy, except in well-selected cases and then in the hands of an experienced physician only. (This is meant as a long-range, sharpshooter's suggestion toward suppressing the evil.) The best way for us to handle this drug is *never* to prescribe it, but to issue and administer it ourselves in every instance; except in the case of confirmed habitués, who should be furnished the remainder of their lives with it at absolute cost. But let the present generation of morphine-fiends be the last of that sad class. In this connection, permit this personal assertion: such remedies have no place whatever in obstetrical practice, unless in the most skilled hands, and then they should be used not once in five hundred cases. By locking up the secretions, morphine induces all the troubles of uremic poisoning.

Tinctura opii camphorata is one of the physician's vade-mecums in the lying-in chamber. This preparation contains but 1 grain of opium in 250 minims, which, in combination with the camphor, oils, and other ingredients, is almost robbed of its narcotic effects upon the adult. It is excellent for relieving after-pain, quiets and soothes the nerves in the nervous crises six to eight weeks before confinement, and, given to the mother where indicated, will relieve the baby's "several months' colic."

LEWIS W. SPRADLING.

Chattanooga, Tenn.

[Dr. Spradling's paper is full of useful suggestions, upon many of which we should be glad to comment with a word of hearty commendation, with here and there a mild criticism, since naturally we cannot agree in everything when we come to details. But there are several points to which we would like to refer, and we will do so with the doctor's permission. For instance, anent the treatment of the troublesome and occasionally "pernicious" vomiting of pregnancy, we call attention to the article by Dr. Lyon, which was published in CLINICAL MEDICINE last year. Applying the observations of Blodgett, Dr. Lyon was able to show that in these cases there was a form of acid intoxication which yielded to alkaline treatment. One of our correspondents has since written us that he secured even better results by combination of the alkali with an intestinal antiseptic and an eliminant.

In the treatment of eclampsia, Dr. Spradling certainly gets down to first principles, since *elimination* is of primary and essential importance. There is one drug, however, that we think of so much importance in this condition that we must call attention to it, namely, veratrine. No other single remedy with which we are familiar is equally efficacious. To hold the convulsions under control while securing the thorough elimination which Dr. Spradling advises, we know of nothing equal to hyoscine, morphine and cactin. Morphine alone has all the disadvantages pointed out, but these are for the most part absent in the hyoscine-morphine combination, which is not only far more potent, but also much less toxic. In eclampsia it controls the convulsions, and in normal labor it may be used with perfect safety, and with a wonderful degree of satisfaction, as attested by thousands of physicians and tens of thousands of mothers, whose labors have been made practically painless by its use.

We shall be glad to receive reports of practical experience from other readers of CLINICAL MEDICINE upon obstetrical topics. Who will submit something?—ED.]

VACCINATION AND TUBERCULOSIS

The covert intimation, insinuation or claim that vaccination is in any way conducive to the propagation or invasion of tuberculosis, cancer, or any other of the human ailments is about as absurd as it would be to assert that it is responsible for

corns and bunions, No one who has had any practical experience in smallpox cases and has had an opportunity to observe the protective and beneficial effects afforded by successful vaccinations would never jeopardize his professional reputation, if he had any, by proclaiming in this enlightened age that vaccination does not protect, or that it invites an invasion of tuberculosis or the ingrowing of toe-nails.

The writer practices in a sea-port town and has had some experience as health-officer of the port with cholera, yellow-fever, smallpox, and other infectious and contagious diseases for nearly fifty years, and he has little patience with those who belittle or deny the protective efficacy of vaccination.

GEO. D. STANTON.

Stonington, Conn.

AN APPRECIATED COMPLIMENT. A DOUBLE MOUTH

I have been taking your valuable journal for some years and appreciate it more each year; I should not like to get along without it. The alkaloids also are proving themselves my best friends in time of need.

No doubt the profession will be interested in an instance of curious congenital malformation that came under my observation—a person having two mouths. I have never heard of one like it. The subject is a Korean girl, twelve years old, who recently came to the dispensary for treatment.

The extra mouth, I found, was formed from the inferior maxillary, and had a separate row of ten teeth, in the center of which was a growth resembling a tongue. A fleshy septum, ¼ inch high, extended from the lips to the angle of the jaw, dividing the two buccal cavities below, but there was no division above this. The upper jaw was normal, the cheek extending out to cover the extra mouth, forming the lips and uniting with the flesh septum in front. The accompanying photograph shows this better than I can describe it.

Fig. 1. Dr. Purviance's case of a child with a double mouth

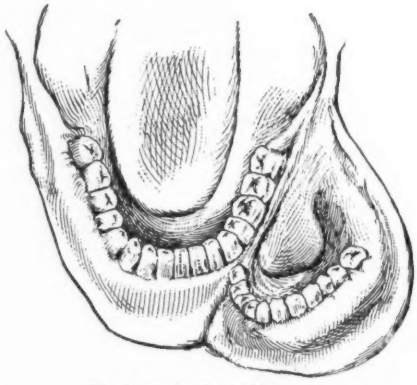

Fig. 2. Showing the double mouth

The girl was no beauty, by any means. By removing the teeth, tongue, and a part of the inferior maxillary and doing a plastic operation upon the cheek and lip, her appearance was greatly improved. She returned to her village happy. I am sorry I did not get another photograph before she left, showing the results.

W. C. PURVIANCE.

Chung Ju, Korea.

CRIME AND WAR

[The subjoined correspondence is of so much interest that we reproduce it in CLINICAL MEDICINE.]

DEAR DOCTOR WAUGH: I want to give you a little fuller statement regarding your article on "Crime and War." You advocate war as the remedy for an existing condition, namely, the prevalence of crimes of violence—robbery and murder.

War is wholesale robbery and murder, organized robbery and murder by the government and a considerable number of citizens.

You prefer organized to unorganized crime. Why? And why is wholesale crime better

than sporadic crime? In New York, Chicago, San Francisco, Vancouver, etc., we have seen examples of systematized robbery (and murder) and white slavery under the protection of the *de facto* government. Was it better than the unorganized crime?

What would you think of me as a physician if I were to advocate wholesale inoculation as the remedy for sporadic cases of smallpox?

Before advising a remedy for a social condition, it is advisable to have some knowledge and ability, but a physician is not necessarily a sociologist. Frank Lyddston can give you some information on the causes of social disorders. I suggest that you read "War—What for?" a book published by George R. Kirkpatrick, West Lafayette, Ohio.

I do not underestimate the value of military drill. But drill and war are quite different.

I am sorry my letter gave you the erroneous impression that I was angry. I was—and am still—astonished at such a prescription from you. Sincerely yours,

T. PROCTOR HALL.

Vancouver, Canada.

DEAR DOCTOR HALL: Yours of the 4th is before me and has been read with full appreciation. Do I advocate war? God forbid! But you are looking upon this question in the abstract, while I have been studying the individual.

These young men to whom I refer, are restless, full of elemental forces, do not yet realize the needs of society's restrictions as do we older men.

Years and experience are needed to bring wisdom. The man begins life as a savage, but gradually learns to restrict himself as his needs infringe upon those of others.

To take, is natural: to recognize other's rights must be learned. So, these youths become robbers evolutionally. As they realize society's demands, they may become honest evolutionally, or substitute legal for illegal methods of preying upon their fellows.

Do you recollect your boyhood? Was there not a "dare" in the neighbors' orchards and their defenses? A challenge most boys could not resist, even though they could have had the fruit for the asking?

Naturally, some youths steal, rob, transgress the law, for the sake of the generation of freedom.

Let war be declared, and a vent for ebullient youth is found. The inherited interests make warriors of them. They welcome the call to arms—and the thought of serving their country is ennobling; it makes heroes of those erstwhile criminals. Patriotism, of all virtues, is the easiest to be aroused, and the most ennobling.

War is an evil that may become extinct when the sexual evil and the alcohol curse have ceased; but until the millenium dawns we shall have these three things to deal with. And we must consider conditions and men as they are, and not from the standpoint of the ideal. Very truly yours,

WILLIAM F. WAUGH.

Muskegon, Mich.

MALINGERING, VACCINES, AND NATURAL IMMUNITY

Just a few rambling thoughts that articles in THE CLINIC call forth. First, about malingering. My surprise is, that a doctor would think of anything else than that the parturient woman would do anything other than stay in bed nine days. I say "Glory be" to the man who made it possible for mothers to have proper care at childbirth.

Then there is the great furore about vaccines. Some get enthusiastic over them and are reporting nothing but successes, going so far as to class those who do not use them as ignorant and not entitled either to the respect of the profession or the confidence of the community. On the other hand, there are those who meet with failure on the first trial and then utterly condemn the method.

My own way has been to go slow and watch results. Our journals are not nearly as full of "606" as they were, and I note that a number of good men are taking the same ground that I did at the start, namely, that it is a good remedy in selected cases, but that it would be necessary also to give careful treatment over a period of two years, just as we always had. Unless you study each individual as a patient and treat him accordingly, you won't get very far anyhow.

My experience in life has been that, "The greater the prejudice the greater the ignorance of that particular thing." Let us go slow, give every one an opportunity to be heard; give every man credit for sincerity of purpose and honesty in his deeds; let us not condemn any good thing because we do not like the man or his methods; let us remember that doctors have opposed many good things, as well as enthusiastically accepted many things that proved to be no more substantial than a soap-bubble.

When I was a boy scarlet-fever and diphtheria were very virulent. Typhoid-fever epidemics were more frequent and of greater

severity. I believe that to sanitation and more hygienic living the credit is entirely due for the lessening of these scourges.

There is no immunity like that from the healthy human body and clean living.

Let us, then, admit that there are some tools we do not know how to use, that we are not skilful with others, that others that are absolutely of no value in our hands might be just the tool needed by someone else.

I can chop down a tree with an ax, and the stump will look as though a horse had gnawed it down. You could take the same ax and cut another and leave a stump as smooth as a polished floor.

Do not condemn hastily, hold fast to that which is proven, and always have an open mind for the claims of the new.

H. M. HOLVERSON.

Boise, Ida.

THE PHILANTHROPY TRUST

Why is it that doctors and lawyers continue to be the butts of countless jokes throughout the centuries, even to this day? Even the most sober-minded individual feels justified in making fun of the mistakes, the fees, and the pious claims to philanthropy for which doctors are responsible. And as for lawyers—why, the very name of lawyer is in many minds synonymous with roguery, as it has been since time immemorial. Let some legal light arise to plead the cause of the lawyer. In this connection, I wish, not to defend the doctor, but to offer a remedy for his plight.

I feel that doctors, as a class, have no reason to complain about the treatment which the public hands out to them. They ask the public to appraise them and their services according to one system of values, while they themselves use an entirely different basis in measuring up the public and its deeds. What do I mean? Simply this. Doctors make claim to the world's especial sympathy on the basis of their philanthropic exercises and then proceed to demand from the world a material reward for their services, just as does the man who shovels the front walk and beats the carpets.

Now, the world does not object to the claims made upon its sympathy; neither does it object to fees, that is, not to the abstract principle of fees *per se*. But common humanity does object, and strenuously, to paying twice for the same services—once with worship, and once more with cash. The Scottish bard wrote, "He who mixes brandy and water spoils two very good drinks." So he who does a kind act, be it never so kindly intentioned, and then claims a material reward as his just due spoils the good impression which he otherwise might make upon the public, whether judged from philanthropic or a material standpoint. Please do not understand me as making excuses for the public; and also remember that I'm sorry for the doctors. But "pigs is pigs," and facts are facts.

So here, the overpowering fact is, that the public does not approve of the double role the doctor tries to carry; to wit, that of volunteer martyr and short-sighted financier. And just as long as doctors persist in trying to fool Mrs. Grundy into believing that they actually hate to take her money, just so long will she persist in considering doctors as a bungling lot of hypocrites.

Come, let us reason together, brother doctors, as many of us as are entirely dependent upon our professional incomes to pay our bills.

In the towns where we live there are at least twice as many doctors as are actually needed to attend to the medical wants of the community. There is just so much medical work to be done, and what part of it one doctor is called upon to do the other doctor or doctors can not do. The country at large, all cities, and most small towns in particular, are overstocked with medical attendants.

There is at least one family in your town who have always employed Old Dr. Z. But you hear, in a roundabout way, that they are dissatisfied with him because he is getting old and careless—or at least they think he is, which amounts to the same thing. Some fine day while you are repairing the hen-coop your wife rushes out of the kitchen and in an excited stage-whisper blurts out: "John! John! Hurry up! Mrs. Rox has just telephoned for you to come up to the house right off. Old Rox has just been taken with another of his bad spells. Hurry up and shave and put on your new suit!"

What a "philanthropic" thrill there chases through your system at the thought that you are to be allowed to "serve humanity!"

Oh you doctor! The whole world knows that you rejoice simply at the thought that you have gotten another of Old Doc Z's families away from him. And he, poor man, needs the business more than you do, and you know it.

We do some charitable work; so also do the farmers, the grocers, the lawyers, the mechanics in our respective communities.

They do their charitable acts voluntarily. But we, on the other hand, allow the public to impose upon and "skin" us mercilessly, simply because we are too consarned lazy and shiftless and jealous of each other to organize and prevent them. We do the larger part of our socalled charitable work because we can't help it, and then attempt to pose in public as halo-crowned martyrs—and, oh, how we do grind our teeth and cuss every time a deadbeat "sticks" us! If ever our wives should be unkind enough to repeat the remarks we make about the "charity-work" we indulge in, perforce—O dear! O dear! How we do tongue-lash (in private) our degenerate, penniless patients and then kick the dog and slam the door, to ease our feelings! And the next minute we try to fool the world into believing that we are, oh! such willing, self-sacrificing philanthropists.

Personally I do not think that doctors, as a class, indulge in a bit more of voluntary, self-sacrificing charity than do ordinary individuals in other walks of life. The men who serve on the staffs of our big hospitals do so in order to perfect themselves in their art. It gives them prestige in their respective communities also, while putting dollars into their pockets. The work they now do would be just as well done—possibly better done, in fact—if they were to resign in favor of some of the dozens of other doctors who are anxious for their positions. Why, then, all this talk of charity and self-sacrifice?

There have been and are now plenty of heroes in the medical profession, so also in the other walks of life. But it is not delicate-minded for us to assume so much loftiness of ideal to our own selves and demand obeisance therefor from the public. I am as charitable-minded and tender-hearted as are any of the average members of the profession; in fact, I feel that I am thus inclined more than are the larger number of the physicians I have met. I try to treat my patients fairly in the matter of attendance, not piling up useless visits nor making exorbitant charges for simple medicines. I like to feel that what little income I have has been honestly earned. But, yet, I am in the doctoring business for, one and only one, reason, namely, to gain a living. I want to square up my accounts, pay off the mortgage on my new house, send my children to college, and then have enough left over to provide for the necessities of old age, besides providing a few luxuries, if that be possible.

I am glad, of course, when I am able to relieve suffering, save life, or comfort the sorrowing, just as I should be if I were earning my living in some other walk of life. But, if I had my way, I should collect a fee, and a fat one too, from every single patient I treated. Then I could dispense charity along lines of my own choosing, rather than, as I am now forced to do, by involuntarily treating entirely free of charge so many patients who for the most part are unworthy willful deadbeats. For the more or less of this kind of work that I am forced to do I neither ask nor expect any praise or applause.

I am not a whit more lofty-minded than the other men in my village who are earning their livelihood at their different daily tasks. And what is more to the point, brother doctors, you are not a whit more holy and philanthropically inclined than I am. And the world 'round about you doesnt' think you are, either, And if only you would confess to the public your actual state of mind, the world would respect you far more than it does at present.

I suppose that my "sordid state of mind" will be considered by most of you as a rank sin, and that, if only my name were known, I would be marked for immediate professional execution. If so, let him who is without sin among you cast the first stone.

NEW ENGLAND PILL-SLINGER.

MALIGNANT PUSTULE CURED WITH MERCURY

That case of anthrax, or, better, malignant pustule, which Dr. Edwards writes about in the March number of CLINICAL MEDICINE, reminds me of a similar case under my care, in the fall of 1876, at St. Louis.

The patient was a young man about 20 years of age, the son of a farmer living in the outskirts of the city. I found the young man with high fever (104° F.) and delirious, his face swollen enormously, eyelids closed and distended like bladders, the neck and shoulders also puffed out and darkened. My diagnosis was phlegmonous erysipelas. Fearing the case hopeless, I asked Professor Hall in consultation, who also entertained severe fears, diagnosing a specific poison, presumably syphilitic; but as there was no sign of syphilis on his genitals, that poison must have been inoculated by a kiss, he thought.

The patient was given large doses of potassium bromide with tincture of veratrum viride; also this mixture: mercury bichloride, gr. 1; potassium iodide, ozs. 2; mint-water, ozs. 3; dose, one teaspoonful every two hours, alternatingly with the bromide. Lo-

cally, we ordered poultices of crushed cranberries. About fourteen days after the swelling was gone, the medicine was given less often.

After the delirium was over, I asked how he came to his disease. He told us, confidentially, that, taking away, against his parents' will, the hide of a cow which died of murrain, some of the poison came in contact with his eyes and face. He was up again in fourteen days, but had to consult an oculist for his eyes, which had suffered the most.

I can find no mention, in any of my treatises, of the use of mercury, in this disease, except that the Homeopaths speak of cyanide of mercury as a remedy against malignant pustule.

E. A. VOGT.

Oxnard, Calif.

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[Doctor Vogt is a live one—for a man to have attained the ripe age of 80 years and still continue in active practice is something to brag of. Or is it that California climate? —ED.]

THE MEXICAN REBELLION

When I was writing a recent communication for this journal (see July, p. 602), I did not know whether I should live to finish the tale, as really the advent, or rather uprising, in the hot part of this country was unexpected. Remember, that at the conclusion of that letter I informed you of an impending attack upon Apatzingan—then my home city.

Well, the town was taken, without resistance, on May 11, and the rebels under Zenobie Moreno and Villasenor held it for five days, when they left for Aguililla. During those five days they got rich booty in the way of horses, saddles, arms, and ammunition, and money to the extent of about $1500.

In war, two qualities make themselves notable—frankness and treachery. The authorities and the people of Apatzingan did not display very much frankness, as will be seen further on, and that is what cost the town its existence.

The rebels left on the 16th of May, but with the threat that they would return. On the last day they came to me also for ammunition and arms, which I refused to give up. They offered to buy, and as I did not want to sell I had to explain, when hard pressed, that I intended to use my arms for self-defense against themselves if there was need for it, but that as long as they would leave me alone I intended to be strictly neutral, and that I should attend to their wounded with the same care as I should attend a wounded soldier of the Government, and without fear on their part that I might disclose their retreat. So they did not insist, and treated us with a great deal of courtesy.

On the 27th of May about 100 Federals made their entrance, but departed again on the 28th, leaving a garrison of 20 men in the place. I and my party quit the place on the 29th for Uruapan, but when we arrived at Paracuaro I heard that this place was about to be attacked by a force of 1000 men; so I did not proceed any further. As Paracuaro is only a distance of three hours' ride from Apatzingan, I was in a good condition to observe what was going on in the last-named place, as well as in Uruapan. At about 5 in the afternoon on the 30th and when it was believed that they were several days' march from the town, the rebels rushed the place from three sides, taking the government soldiers unawares. However, the rebels lost 36 men and the defenders 5, one of them being the telegraph operator. But the town itself (that is, the center of it) was burned to the ground, only the suburbs being left, to show where Apatzingan has been. Mrs. Hollmann and I went to give such aid as was in our power, and the smoking ruins of the beautiful place and the frightened faces of the homeless people presented indeed a painful sight.

On June 3 an attack was made on this town (Uruapan) and it lasted without intermittance from 11 in the forenoon until the next day the same hour, when the defenders, composed of the same townspeople, had to give up, owing to the lack of ammunition.

The attacking party lost over 150 men and the defenders only three. Owing to the very stubborn resistence the rebels encountered, it was expected that they would exercise reprisal; but they behaved very well, indeed, exacting an indemnity of only $14,000, and giving their men three hours to sack. The damage done in the looting amounted to about $25,000, but they protected the city from the looting of the rabble, which would have been terrible, indeed.

Among others, they hunted unsuccessfully for a German by the name of Wilhelm Wolf, with the intention of executing him, as he, being a fine shot, had killed fifteen men of theirs, picking off the dynamiters in the act of throwing their bombs, but which never left their hands and on several occasions had exploded near the dead bodies of the throwers

in every instance and who had been shot through the heads. On this account, it is believed, the town escaped being burned. Wolf left the town for Morelia as soon as the Federal soldiers came in, out of fear of assassination from some sympathizers left behind.

We were still in Paracuaro when the rebels came in from this city from different directions in bands of from 50 to 60, having chosen that town as their rendezvous.

In Paracuaro, one man, Captain Basave, one of the rebels' principal dynamiters, died of a bullet wound from a 30-30 he received when about to throw a bomb. The bullet struck him in the upper maxilla, and, as he had ridden two days in a tropical sun without attention of any kind, gangrene set in and he died the next day.

The socalled Colonels Porcallo and Almaro, who commanded the party, extended me every courtesy; and when Mrs. Hollmann, rather unstrung from the emotions of the last week, broke out in tears, they seemed very much affected and vied with each other in kindness and protestations of friendship and respect. And they complied to the fullest extent with their promises, which again proves my assertions on a former occasion, that foreigners have nothing to fear, *so long as they mind their own business.*

I will fight, and fight like the devil, if they should try even to take my arms from me, and they know that too; but it would be foolish to suppose that that is the reason of their respecting me or that they are afraid of me. But they are sure of my neutrality; they know that I will not use my arms against them; and, so, they allow me to keep them for protection against small bands of bandits, and *they* protect me besides. It seems rather strange to me, that foreigners should fight on either side, and then, when it goes against them, they will squeal and ask for the protection of their government, and in that way cause much unnecessary international bad feeling.

So far as the Mexicans are concerned, we again note their deplorable lack of patriotism; as that is what really keeps the revolution alive. Egotistical as they all are, they will look only after their own interests, and, trying to stand alone, they do not stand at all. Thus, for instance, we saw in Apatzingan, when Moreno and Villasenor, whose people were very poorly armed, desired to make peace with the Government, they asked for 1000 pesos ($500) to pay off their men.

The town did not want to fight, neither did they want them to come in, so they promised these rebel commanders a thousand pesos. I volunteered to help and was the first man to bring my part of the money, pointing out to them the fact that, as the rebels had a payroll of about $120 or more per day, it was necessary to collect that money quickly, for their demands would, of a necessity, be greater with every day that was lost. And, yet, some very rich men who had subscribed 50 pesos sneaked out of town in order to avoid paying this small sum.

On the 11th, the rebels came into town on a charge and took possession, but, as they really were tired of playing at revolution, they did not commit any abuses, not even turning out the prisoners. Thereupon, the people of the town, emboldened, just made up their minds to fool the intruders altogether. And that lost them the town; for on the fifth day they forced the different citizens to give up, all told, 3000 pesos, exacting as much as 500 pesos from some men. Besides, they took all the arms, ammunition, and horses they could find; and, in addition, they found a depository of government arms and two mule-loads of cartridges.

Fifteen days later they returned and attacked the town with its own arms, and since then, besides destroying the town, the damage done by them in other parts is incalculable.

Here, in Uruapan, the rich men (and there are several millionaires) were requested to contribute with $2500 with which to buy ammunition for the protection of the town. They refused, and we have seen the results of this refusal. There also exists a certain estrangement between the wealthy and the poor. As I have said before, the poor class, the rabble, is the worst enemy a town or city can have. On the other hand, the well-to-do do not take any interest in the poor, as was demonstrated here in Uruapan, where the rich had the defenses thrown up only two blocks from the center of the city, leaving all the rest of the city, the property of the smaller holders altogether exposed and without any protection whatever.

Again, the rebels take all the horses, saddles, money, and arms they can get. Then the despoiled owners call on the government for protection; but they will not help the soldiers by offering them remounts for their jaded and played-out horses, and the result is that they never can catch up with their elusive and nimble enemy. Nay, they will not even let a soldier have something to eat if he has not the wherewith to pay on account

of being too far from his base; and even now there is a tremendous kick going up, because the troops that have come to protect the town have not paid for their lodgings. Add to this the unpatriotic ambition of men who want to be President, Governor or covet some other position or lucrative employment, the reader will understand that the renunciation of Huerta is not sufficient to secure peace. Only Porfirio Diaz knew the remedy for the evil and applied it in the proper manner.

The next time I will tell the readers of THE CLINIC something of bullet-wounds, as made by different-caliber guns, as we have to treat those made by the high-velocity 30-30, as well as by the old-fashioned 50-caliber Remington. The difference in wounds is really interesting and the difference in treatment far more so.

A. R. HOLLMANN.

Uruapan, Mexico.

MAY 25, 1913

I went into the House of Pain
With faltering step and bated breath.
My star of hope was on the wane,
For fear could hear the wings of Death.

I wept whilst one lay still and sighed—
Lay still as I sat there and wept,
And knife and needle painless plied;
For in a magic sleep she slept.

For two long hours she lay as dead.
(Oh! on what tardy wings time flew!)
Whilst men of magic round her bed
Performed a miracle anew.

For two long hours, whilst anguish tore
My heart, they toiled and banished pain,
Then brought her back from Lethe's shore,
And she, I loved, was mine again.

WILFRED HILL.

Birmingham, England.

CLINICAL NOTES FROM BENNETT MEDICAL COLLEGE

When the first stage of labor is unduly prolonged, suspect an occipitoposterior position.—*Rittenhouse.*

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The first principle in treating dropsies is, that the patient must discharge more liquid than he takes in.—*Waugh.*

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The reason we seek to reduce temperature in fevers is to lessen the toxemia; which latter is the source of most danger.—*Waugh.*

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When you want axis traction, and no Tarnier forceps is at hand, slip a long, narrow strip of gauze through both fenestra of the one you ordinarily use. You can make traction with it in any desired direction.

—*Rittenhouse.*

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A bag of waters that is too short to act as a uterine dilator should be ruptured. Let the presenting part come down and act as a dilator.—*Rittenhouse.*

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Veratrine, aconitine, and gelseminine reduce fevers by stimulating the excretion of toxins, not by acting directly against the heat or its production.—*Waugh.*

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Digitoxin stops the dribble of blood that persists, after ergotin has been given to beginning toxic action, in postpartum and post-abortion hemorrhages.—*Waugh.*

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In asphyxia neonatorum, insufflation is much superior to artificial respiration, because in the latter the air *may* go into the lungs, while with insufflation it *must* go in.

—*Rittenhouse.*

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The first and last principle in treating obesity is, that the patient must weigh every bit of food and drink he takes, and reduce the total daily intake until he begins to lose weight.—*Waugh.*

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It is often possible to cut short an acute laryngitis and to prevent the frequent sequel, acute bronchitis, by applying a 3-percent solution of zinc chloride to the interior of the larynx.—*S. S. Bishop.*

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Gelseminine suits fevers with little temperature but with delirium; aconitine-cases with irritability of the stomach; veratrine, when there is exceeding need to stimulate the eliminants.—*Waugh.*

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Tying the cord in two places and cutting between is a relic of the days when it was believed that the mother could bleed through her end of the cord. Better leave her end untied. Escape of the blood from the placenta favors its early expulsion.

—*Rittenhouse.*

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Many cases of acute incipient coryza can be aborted by a coryza tablet given at the onset of the attack. If necessary, repeat the dose once or twice, with two to four or six hours between the tablets. They contain: morphine sulphate, gr. 1-12; atropine sulphate, gr. 1-600; caffeine, gr. 1-6. Flush the bowels.—*S. S. Bishop.*

JUST AMONG FRIENDS

A DEPARTMENT OF GOOD MEDICINE AND GOOD CHEER FOR THE WAYFARING DOCTOR

Conducted by GEORGE F. BUTLER, A. M., M. D.

I HAVE been greatly interested, recently, reading about the work of Dr. William Goodhue among the lepers of Molokai. I knew Doctor Goodhue as a student, although I was better acquainted with his brother, Dr. E. S. Goodhue, who is living at Holualoa, Hawaii, and about whom I shall say more later.

Ever since I have known of the great work Dr. William Goodhue is doing at Molokai I have often compared his quiet, unassuming devotion to what he believes to be his duty with the life of the flamboyant, commercialized physician or surgeon so much in evidence nowadays, particularly in our larger cities.

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I know men who would assert that Goodhue has no ambition. Ambition for what? Why, such men as Goodhue and Grenfell have an ambition such as some doctors have no conception of; they are doing a work with which that of many a doctor whom we know does not bear the slightest comparison.

Goodhue and his kind are striving for something infinitely higher and nobler than wealth. I do not wish to belittle ambition; still, it is amusing and in a sense pitiful to witness the struggle of some men for wealth and fame.

Of material possession, what, after all, abides with us but an idea? Are not the good that we do and the truth that we proclaim the greatest legacy we possibly can leave? Think how glorious must be the life of a man who can do such a work as Doctor Goodhue is doing, and enjoy it—a man who can stamp all realities upon his thought, place the springs of happiness within himself and draw thence uncounted pleasures in ideas, in modest service to such poor sufferers as the lepers of Molokai, and through it all unsoiled by an ambition for money or for fame!

How different he from the man whose brain thinks of nothing save the quickest way to accumulate money; for such a one ever is discontented and remains ignorant of the real object of life David Swing, of Chicago, once said something to the effect that when a man pursues money alone his features become narrowed; his eyes shrink and converge; his smile, if smile he have, hardens; his language is void of poetry and ornament; his letters to friends dwindle to telegraphic dispatches; the man seems to have no time for anything, for his heart knows of but one thing for which it wishes time.

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It is possible for everyone of us to acquire the wealth of goodness, wisdom, and truth; and this, indeed, is true capital—riches no one can take from us. A man with such wealth is not dependent upon anyone's action or inaction. He can accept all that befalls him or is decreed onto him with a thoughtful, simple, and serene spirit. And if he is rich enough in wisdom, charity, and loving kindness he can leave an estate to mankind that will last through the ages.

Men who have given us great truths in prose, poetry, art or music; who inspire us to unselfish and noble endeavor as Goodhue inspires us; who in their simple daily lives have made us better, have lightened our burdens, purified our taste, eased our pain in any sorrow or affliction, calmed the strife of mental conflict or helped us to love our fellowmen better, in short, have taught us better how to live—such men have given more to us than the worth of all the gold that ever was mined.

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Such a man as Doctor Goodhue can wait for death with a cheerful spirit, knowing that what he has done can not be destroyed by falsehood or buried in the debris of ignorance or the lust for money.

However, a doctor need not isolate himself among the lepers of the Hawaiian Islands or the sufferers of other far-away lands to demonstrate the virtues so characteristic of Doctor Goodhue. There is many a medical hero, many a true and great man working

night and day in the hearts of our great cities, suffering bravely and uncomplainingly the loneliness and vicissitudes of a big city, than which there is no life more hard or lonely at times; or practice in remote country districts, unknown save in his immediate community, yet who is successful in the highest and finest sense of the word. All praise to such doctors!

I am writing this while on vacation, and a doctor on a vacation should not write on medical subjects; still, we may write of medical men, and the ones uppermost in my mind today are the brothers Goodhue. I have already referred to the younger brother, and now I am going to say a few words about my old friend Dr. E. S. Goodhue.

Where hast thou been thro' this bright autumn day,
Dear distant friend? Hast sought the mighty hills
That guard thy Doctorage, on by the rills
Marked the wild waters break in crystal spray?

Hast seen the sunlight tremble on the leaves
Of fragrant forest aisles, or in the fields,
When the rich earth her generous harvest yields,
Loitered to watch the reapers mid the sheaves?

And hath memory of thy classmate ceased?
Is there no blossom to recall his name;
No bird his wildwood fancy to proclaim;
No stream that bears his image in its breast?

I question not, for oft from him to me
Come loving messages from far Hawaii.

For nearly twenty-five years we have corresponded, and I believe our friendship has grown with the years, though it has been fully twenty years since we have seen each other.

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Doctor Goodhue was the first one to start a college-paper in Rush Medical College, and he called it *The Corpuscle*. But I doubt whether there were many responsive corpuscles in the hearts of the faculty members; for, as I recall it, the members of the faculty discouraged his venture, almost to a man—maybe one or two wished him well, but they offered no real aid, moral or otherwise.

I had been graduated a year at that time, and, while not a member of the faculty, was lecturing on materia medica and medical pharmacy, and, so, was looked upon by Student Goodhue as a member of the teaching-corps and was interviewed by him regarding the advisability of starting a college-paper. I was enthusiastic over the idea, and encouraged him to make the attempt. This was the beginning of a sympathetic friendship that has continued for nearly a quarter of a century and grown warmer and more enduring with the years.

Dr. E. S. Goodhue not only is a good and successful physician, but an author of considerable note and a true poet. I have preserved every letter that he had ever written me, and, if published, they would surpass in interest and literary merit many a well-known book of essays. His published poetical works are well worthy a place beside those of our best American poets.

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I do not know whether my friend Goodhue has made much money since he left college, or not. I don't know that I ever have thought of this before in connection with him. One looks for a higher success, than mere success in getting money, in a man like Goodhue. I have every reason to believe that he has lived happily up to his ideals. Judging from photographs sent me, he has, overlooking the sea, at Holualoa, Hawaii, a beautiful home, called "The Doctorage," and presumably sufficient money for his simple needs; and, really, that's all any man does need.

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There is no more pitiable wretch than the man who has mortgaged himself, soul and body, to money, in whom the desire to accumulate money has starved every other affection and desire. The poorest of all human beings is he who is rich in gold but intellectually and spiritually bankrupt.

Little that is truly noble can be expected from one whose chief object in life is the making of money. Though a man without money is poor, a man with nothing but money is ever so much poorer. He may enlarge his premises, but that very night his soul may be called away; and whatever monument with flattering title his heirs may erect over his grave, God will write this poor mortal's epitaph in one word of four letters —"Fool."

All the money you get is really only in the nature of a trust fund, which you are in duty bound to use as a steward, to better the condition of life of others as well as your own, and to make men and communities happier and more useful. Wealth cannot purchase pleasures of the highest sort. It is the heart, the taste, the judgment that determine the happiness of man and restore him to the highest form of being. Money cannot buy health, life, love or a happy hereafter. A great fortune is not necessary for the attainment of faith, hope or charity.

I know not how much the brothers Goodhue are worth in money, but I do know that they are worth more than almost any other of the doctors I know in all that goes to make the highest type of man.

Nature cannot be outraged with impunity; although a generous giver, she is a hard bargainer, and invariably, in the long run, the man who works too hard, who crowds the work of forty years into twenty, who burns his candle at both ends will find that he accomplishes less by attempting to overmatch or cheat nature, than by accepting her own terms. In all likelihood, the man who toils and moils at business, without relaxation or enjoyment, through the best years of life, with the hope of retiring at last and making the evening of life a holiday, will never retire, except into an untimely grave.

Vacations are the true safety-valves of professional and business men, and he who grants himself occasional rest not only will live longer, but will accomplish more than he who laboriously drudges from one year's end to the other.

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For the past several months in my work at Mudlavia I have heard nothing but "tales of wo" from "early morn till dewey eve," and I needed this vacation, that I might do more efficient work during the ensuing winter. It is needless to say that I shall visit no hospitals and, save a few hours' consultation with W. B. Saunders Company of Philadelphia, who this winter will bring out a big one-volume work of mine on the "Treatment of Disease," I shall not talk medicine or medical works with anyone, if I can avoid it.

I may play golf, some; I shall take some trips on the water; and I know that I shall visit art galleries, libraries and book-shops, and listen to good music—but visit hospitals, I should say not!

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Every person should have at least one side-issue or fad—an avocation—apart from his regular vocation. After one gives so much time every day to the routine of work, to turn aside for a while to something entirely different is restful and beneficial. No matter what our regular vocation may be, it is harmful to get into a rut, just simply going through a treadmill of duty, day after day, with no letup. One should always try to bring into each day some new activity, some new train of thought.

It is not a wise thing to get into a certain groove and just simply wear one's life away. Monotony kills quicker than anything else. We should have our daily duties, in which we are interested, put our energy and enthusiasm into this work, and do it with all our might. Then, when that is done, turn to some other activity, or else rest.

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And we should have ideals both in our work and in our play. We all have ideals so far as our work goes, I presume; we all look forward to some day stepping out and up; to better our own conditions, to advance our business by some new thought, system or discovery. An ambition truly admirable, this, when honesty of purpose guides in the development.

But sadly true it is that selfishness cuts in, slowly at first, but to grow until it overpowers. Honesty of purpose becomes determination for gain, and the beauty of it all is swept away by the desire for wealth that will make ease and luxury possible.

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Then, indeed, there is danger—for the temptation is great. Ambition is a sin when the mind becomes warped and twisted by selfishness. Its energies are bent toward shrewd, calculating sharpness. Honesty has become a secondary principle; friendship is an unknown quantity. Narrowness, treachery, and absolute dishonesty are factors often brought into active use in this great struggle for selfish ambition for success.

And this is true, that ambition today is for wealth and, with it, selfish ease and comforts. Sentiment can not exist, love and friendship are forgotten, and honesty is an afterthought far too often when "business is business."

Speed the day when all men, doctors and all, will cherish high ideals. The religion of high ideals is a grand one, and it could be so preached and practiced that Heaven would not be questioned and Hell would be a back number. Try it on!

AMONG the BOOKS

ROBINSON: "SEXUAL IMPOTENCE"

A Practical Treatise on the Causes, Symptoms, and Treatment of Sexual Impotence and Other Sexual Disorders in Men and Women. By Wm. J. Robinson, M. D., chief of the department of genitourinary diseases and dermatology, Bronx Hospital and Dispensary; editor, *American Journal of Urology*, and *The Critic and Guide*, and author of "Sexual Problems of Today," "Never-Told Tales," etc. New York: Critic and Guide Company, 1913. Price $3.00.

Every reader of CLINICAL MEDICINE is familiar with Doctor Robinson's ideas concerning the etiology of sexual impotence and the methods of treating this disorder. He is known to be a radical, so much of a radical, in fact, that every reader of his books seems to be either a warm adherent or a violent critic; he is necessarily partisan for him or against him. Any physician who reads this book will understand why there is such a difference of opinion concerning the merits of Dr. Robinson's views.

The matter is divided into eight parts, devoted, respectively, to masturbation, pollutions and spermatorrhea, sexual impotence in the male, sexual neurasthenia, sterility, sexual disorders of women, priapism, and, lastly, miscellaneous topics.

In these different chapters, Dr. Robinson finds opportunity to present certain pronounced views concerning the sex-problem that are characteristic of his work in this field. Thus, for instance, he looks upon masturbation, in spite of the fact of its almost universal existence, as one of the most important causes of impotence in the male; coitus interruptus he condemns in unsparing terms, saying that "no fact in medicine is more firmly established than the evil influence of this vice." The cure for the latter antisocial condition is some other, innocent, method of preventing conception.

But from this, it is readily seen that Doctor Robinson does not believe continence should always be practiced on the part of the male or too generally advised, even for the unmarried. His ideas, as set forth in this book and so often uttered elsewhere, lead to the belief that he holds that any form of repression or pseudoexpression of the sex-instinct must lead to sexual weakness.

Especially interesting are the chapters upon treatment. These are in every respect excellent and practical and cannot fail to be of service to any physician who has patients of this kind to treat—and who has not? The book is made more interesting through the introduction of numerous illustrations from practice. These cases are recounted in a graphic way, which gives them a peculiar grasp. Indeed, the entire book is written in that strong, straightforward conversational style which has made *The Critic and Guide* and all of Dr. Robinson's books so wonderfully popular with physician readers, and to a considerable extent with lay readers also.

We are firmly of the opinion that every physician, whether he agrees with Doctor Robinson or not, should read his books. They are thought-stimulating and cannot fail to be helpful in many points, even if very often the average reader will find much difficulty in accepting the author's views.

"THE PRACTICAL MEDICINE SERIES"

The Practical Medicine Series: Comprising Ten Volumes on the Year's Progress in Medicine and Surgery. Under the general editorial charge of Gustavus P. Head, M. D., professor of laryngology and rhinology, Chicago Postgraduate Medical School; assisted by Charles L. Mix, A. M., M. D., professor of physical diagnosis in the Northwestern University Medical School. Chicago: The Year Book Publishers. Series 1913. Price, per volume, $1.50; price of the series of ten volumes, $10.00.

We are in receipt of the first six volumes in this excellent series, these being devoted to general medicine, general surgery, the eye, ear, nose and throat, gynecology, pediatrics, and orthopedic surgery. The anteceding volumes in this series are now well known to

every reader of this journal, having been reviewed from year to year in these pages, so that it is not necessary to add anything regarding the general character of the work.

In every respect these volumes are fully up to the standard already set. The volumes on general medicine and general surgery are, naturally, of the greater interest to the average reader, although relatively little that is strikingly new has been added within the last year. Of especial interest is the chapter on tuberculosis, in Volume I, and the chapters on operative technic, tetanus, surgery of the blood-vessels, and the surgery of the abdomen, stomach, and intestines, in Volume II. No doubt the volumes on gynecology, eye, ear, nose and throat, pediatrics, and orthopedic surgery will be found equally interesting by those especially interested in these specialties. The reviewer especially enjoyed the review on infant feeding and gastrointestinal diseases, in the volume on pediatrics. This series is one which the doctor should procure every year.

DAWSON: "RIGHT OF CHILD TO BE WELL-BORN"

The Right of the Child to be Well-Born. By George E. Dawson, Ph. D., professor of psychology, Hartford School of Religious Pedagogy. New York and London: The Funk & Wagnalls Company. 1912. Price 75 cents.

If this is the kind of mental food that is habitually being served up to the students of the Hartford School of Religious Pedagogy, then that institution ought to be turning out a pretty high quality of religious educators; and it is well, indeed, that somebody persuaded Doctor Dawson of the desirability of projecting his voice beyond the limited confines of his lecture-room into the public forum. And it is a clear and unmistakable voice. It breathes virile sanity and sound common sense from start to finish. Doctor Dawson knows what he wants to say, and knows how to say it; furthermore, what he says is worth while, decidedly.

The book may, in fact, be said to be the practical clearing-house of all that has thus far been uttered on the subject of eugenics. The ultimate touchstone of all science and philosophy, of course, is its capacity for utilitarian application. Doctor Dawson evidently has applied this touchstone, with hard-headed discrimination, to all the mass of theories and facts that eugenistic researchers and speculators have been piling up in recent years, set forth the result in this little book.

To those who are interested in the research and speculative processes, to be sure, the book will make no particular appeal. But to that growing number who desire to put into practice so much of eugenic teachings as meets the practical test, it will furnish a trustworthy guide to what constitute the proven things in a clear instruction for applying them.

PETTEY: "NARCOTIC DRUG DISEASES"

Narcotic Drug Diseases and Allied Ailments: Pathology, Pathogenesis, and Treatment. By George E. Pettey, M. D., member of the American Medical Association, The Society for the Study of Alcohol and Allied Diseases, etc. Philadelphia: The F. A. Davis Company. Price $5.00.

There is probably no one in this country who is so well qualified to speak with authority upon the narcotic-drug diseases as Dr. Pettey. He has had clinical experience with more than three thousand patients of this class, he has been an exceptionally careful observer, and he has studied both his patients and their reaction to the appropriate remedial agents as no other physician in this or any other country has done, so far as we are able to ascertain. It is not surprising, therefore, that Dr. Pettey has uncovered a goodly number of fallacious views concerning drug-diseases and drug-habits and has placed their treatment on a fairly scientific basis.

Among other things, Dr. Pettey tells us that the excessive use of morphine is not a "habit," as we understand that word; that it is not a neurosis; that the morphine-addict is not a "pervert" or a "degenerate"; and that such a one is not inveterately untruthful. Morphine-addiction, Dr. Pettey tells us, is purely and solely a toxemia, and as such belongs to the field of internal medicine; and, also, it is a toxemia of pharmacogenetic, intestinal, and autogenetic origin. It is the recognition of its toxemic nature which furnishes the key to the treatment that has been employed with eminent success by Dr. Pettey for many years.

Briefly speaking, the method of treatment advised is begun with a course of thorough purgation, after a preliminary hot bath, and the free use of drinking-water, to flush the kidneys. Various purgative combinations are employed, but one containing calomel, cascara, ipecac, strychnine, and atropine

seems to be the favorite. This is followed in six or eight hours, after the final dose with large hypodermic injections of strychnine, and a saline laxative or castor oil.

After this preparation, comes a period of rest, during which it is possible to reduce the quantity of morphine, as a result of the cleanout process. When the patient has gone as long as possible after this without discomfort and begins to feel the need of the narcotic drug, it is now given him in reduced dosage. Forty-eight hours after the first purgative dose another, similar, course of elimination is gone through with. After such a thorough cleanout the craving for the regular allowance of morphine is always greatly reduced.

At this stage, when the patient once more begins to demand his narcotic, he is given 1-200 grain of hyoscine; this to be repeated in thirty minutes. This dose may be increased or diminished, according to the patient's insistence, and is given at sufficient intervals to keep him free from pain. Meanwhile, small doses of sodium hyposulphite are given every two hours, while the heart action is maintained by means of sparteine sulphate, which is given in 2-grain doses every four to six hours.

Strychnine is always administered by Dr. Pettey, and in unusually large doses. This remedy is given mainly for the purpose of restoring and maintaining the function of the intestinal muscles, which are semiparetic, as a result of the long course of drug-habituation.

Cases are reported by Pettey in which the strychnine was given in 1-8 to 1-4 grain doses, every two hours, until one full grain, all told, had been given, and, yet, no discomfort was experienced by the patient; while, on the contrary, by maintaining the bowel tone, the griping, diarrhea, vomiting, and other symptoms of abdominal distress experienced by these patients were kept under control.

Dr. Pettey does not regard hyoscine in any sense as a specific or a "cure" for the morphine-habit. However, in his opinion it does fill "as important a place in the treatment of morphinism as does chloroform or ether in the practice of surgery." Its object is the same as that of giving anesthetics in surgical operations—to prevent pain. Elimination, however, is the one essential and all-important factor in the successful treatment of morphinism.

When the methods described by Dr. Pettey are carried through carefully, usually in five or six days, the patient is convalescent —not well, however, for a considerable further period of careful treatment is necessary to build him up and restore him to health.

It is refreshing to read Dr. Pettey's drug studies, in which the book is particularly rich. Readers of CLINICAL MEDICINE already have had the privilege of perusing some of the chapters in this book devoted to the use of purgative remedies. Some of this material appeared in our Journal in the numbers for January and February of this year.

The doctor's ideas regarding the use of strychnine and sparteine, of gelseminine, pilocarpine, and other remedies—many of them alkaloidal—are sound, scientific, and built upon years of successful experience. Whether a physician treats the drug-habits or not, he cannot read this book without gathering from almost every page something that will be of distinct service to him in the management of diseases of all kinds.

Naturally, most of this book is given up to the discussion of the morphine-habit. Every phase of this subject is considered, and it is intensely interesting all the way through.

The reviewer was much interested in the sketch of the narcotic experiences of De Quincey; also in the study of the various methods of treatment of the morphine-habit, which have been used from time to time, among them, Lambert's alleged specific, much vaunted in recent years in *The Journal of the American Medical Association* and elsewhere.

Comparatively little space is devoted to cocaine and alcohol, enough, however, to give a very clear idea of the methods of treatment employed by the author. We should like to refer to these in detail, but the space at our disposal is limited.

Rarely have we seen a book so well worth the consideration of the physician, so deserving of study, and so useful an addition to the physician's library.

DELEE'S "OBSTETRICS": A CORRECTION

Through some error the price of DeLee's "Obstetrics" published by W. B. Saunders Company, Philadelphia, is given as $9.50 in the review of this book, appearing in the August number of CLINICAL MEDICINE, page 699. The actual price of the book, cloth bound, is $8.00.

We are glad of the opportunity to call attention again to the merit of this excellent work.

CONDENSED QUERIES ANSWERED

PLEASE NOTE

While the editors make replies to these queries as they are able, they are very far from wishing to monopolize the stage and would be pleased to hear from any reader who can furnish further and better information. Moreover, we would urge those seeking advice to report their results, whether good or bad. In all cases please give the number of the query when writing anything concerning it. Positively no attention paid to anonymous letters.

QUERIES

QUERY 5949.—"Melanoderma." E. R., South Dakota, has under observation a peculiar case and desires help in making the diagnosis. The patient is a girl ten years old and of normal development. In the second year after the child's birth a dark coloration of the lips appeared, the pigmentation gradually extending until now her entire face is black like a negro's. However, there is no negro blood in either the parents' or their ancestors' veins. The child's body is white, but the hands and arms also have become a dark coffee color. She is also troubled with shortness of breath, mitral regurgitation, is rather inactive, likes to sit still, and never goes away from home. The parents came from the Netherlands and have been in this country only three years; they never saw a negro before coming here.

The pigmentation described is known as melanoderma (also as melasma, hyperchromia, etc.), but just what causes it in this case we confess ourselves unable to conjecture from our correspondent's report. Melanoderma, of the common "patchy" variety, is not unusual, the pigmentary discoloration often being intense on the face and neck; also, the axillæ, genitocrural region and nipples are usually involved.

Melanoderma is, of course, not a disease *sui generis*, but the symptom of some definite condition, often systemic or organic, and among the primary diseases causing it we may mention tuberculosis, syphilis, cancer, Graves's disease, uteroovarian disease, and malaria. Apparently all these may be excluded in this instance. In some respects the symptoms suggest Addison's disease, in which there is the same history of asthenia, heart weakness, and skin pigmentation—the latter occasionally being intense enough to make the patient look like a negro.

In Addison's disease, the discoloration begins first on the exposed portions of the body, and is likely to be most intense in these localities. There is great lassitude, loss of physical and mental energy, headache, dizziness, and more or less loss of appetite, and disturbances of digestion, such as nausea, vomiting, and diarrhea. Addison's disease usually is fatal, and only rarely is it prolonged for eight or ten years. Also, it occurs most often between the ages of fifteen and forty. However, it is worth considering in this instance.

It is barely possible that this child, at some time, has received a prolonged course of treatment with silver or arsenic, which cause skin pigmentation; however, in such cases the pigmentation generally is diffuse. A mitral lesion might cause cyanosis and ultimately some darkening of the skin, but certainly not the intense pigmentation described.

Evidently this is a rare case, and it certainly is an interesting one. We would strongly urge a most thorough examination of the child, and that the blood be studied with care. We should very much like to have a photograph of this child and all the data that can be obtained. Then we shall be in a position to study the question more intelligently.

LATER.—Since this was written we have received photographs of this girl from the doctor, which have been referred to Dr. Sajous of Philadelphia, who has given us an interesting opinion on the case, which will be printed next month.

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QUERY 5950.—"He Would 'Operate for Appendicitis.'" W. S. W., Georgia, tells us that he has never performed the operation for appendicitis, and wishes we would give him (in detail) the exact method of operation, and continues:

"How long must the incision through the abdomen be and in what location? Be exact,

please. What is the antiseptic technic—*in detail?* How are the dressings arranged and the drainage-tubes placed, and what is best material for the same? Don't leave me to presume anything about it, from start to finish, but give everything in full, please. Is there any previous preparation of the patient in the way of dieting, bowel flushing, etc.? Give me the technic when pus is present and when it is not. I wish to know it all, from start to finish."

Frankly, doctor, we would most earnestly advise you *not* to attempt doing an appendectomy. We can readily see, as you state, that you know nothing whatever of this work, and it would be highly dangerous —yes, improper—for you to attempt the operation. You would most certainly lay yourself open to a suit for malpractice.

We do not understand, however, why it is that you "fail to find the desired information" in your textbooks, as you declare, when every work on surgery devotes considerable space to this subject. Under the circumstances, you readily will see that it is out of the question to cover the entire subject, when the answer can be found by consulting any good work on surgery, as for instance the "American Textbook of Surgery," Mumford's "Practice of Surgery," Keen's or Bull's "Surgery," or even Wharton's "Minor and Operative Surgery," where you will find every step of the various operations not only described but illustrated. However, before closing, let us once more urge upon you the great danger of attempting to operate upon a living human being without first having every step demonstrated by a competent surgeon. Occasionally appendectomy is a very simple operation, but all sorts of difficulties may be encountered when the abdomen is opened, and the operator must be prepared for anything.

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QUERY 5951.—"Thiosinamin as Solvent of Scar-Tissue." L. M. B., Texas, desires to use thiosinamin as a solvent of scar-tissue and wants to know what is the most effective and safest preparation.

Thiosinamin is a synthetic (allyl-sulphocarbamide) derived from the volatile oil of mustard-seed. It occurs in the form of colorless crystals soluble in 30 parts of water, and readily soluble in alcohol and in ether. The average dose is 1-2 to 1 grain three times daily, although, if the stomach is not disordered, as much as 3 grains may be taken.

After the hypodermic injection of a thiosinamin solution, the surrounding tissues usually become somewhat congested, frequently there is an increase in the quantity of urine, and very rarely nausea and vomiting occur. Sometimes, also, it produces a reaction similar to that caused by tuberculin. It is well to remember that thiosinamin should not be injected *into* cicatricial tissue.

The effect of thiosinamin upon scar-tissue is unique. When injected subcutaneously as well as when given by the mouth, it causes a local reaction in the scar area, and the cicatricial tissue undergoes more or less resolution and is absorbed.

After a hypodermic injection, the irritative effect is produced in a few hours, but when given by the mouth the impression is less pronounced. The visual effect from a single dose lasts about five hours.

As for the "most satisfactory preparation," that, in our opinion, is perhaps what is known as thiosinamin compound, a glyceroaqueous solution with antipyrin. It is a powerful resolvent of cicatricial tissue, especially of the "fleshy," blood-filled type. Although valuable when taken internally, best and most definite results are secured from the hypodermic administration.

"Its use," to quote from one authority, "is indicated in stricture, corneal opacity, deafness due to adhesions, lupus, glandular tumors, and where it is desirable to resolve cicatricial masses and adhesions in any situation. Even keloid has yielded to its persistent use.

"Technic: Cleanse the skin over the injection-area (the glutei or the loose tissues of the anterior abdomen should be selected) thoroughly with alcohol. Then with a sterile all glass syringe and sterilized needle inject the solution slowly. Do not massage the tissues. Inject on opposite sides of the body, every second or third day, alternately.

"Internally: 5 to 10 drops, twice daily, in a weak alcoholic vehicle, continued until the desired results are obtained.

"Hypodermically: 6 to 12 minims, every third day.

"Note: Cloudy solutions showing precipitation and not cleared by warming should not be injected, but may be used orally without detriment.

"Whenever thiosinamin is used, elimination should be stimulated, and arsenic in some form (preferably the iodide) given in full doses."

Intramuscular injections of such a properly prepared solution are comparatively painless.

Thiosinamin injections have been found very satisfactory also in lupus, and recently

Doctor Abrams has reported two cases of endocarditis in which the drug used subcutaneously, effected a cure.

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QUERY 5952.—"Spina Bifida." "Finger Paralysis Following Fracture of the Humerus." R. H., Nebraska, writes as follows: "During nine months of most encouraging alkaloidal practice I have had to contend with several serious conditions, such as may at any time surprise a country doctor unawares. I present two for your consideration.

"1. Confinement case. Everything normal, but the infant has meningocele in the lumbar region; spinous processes absent; a thin glistening arachnoid membrane is all that covers the cord posteriorly; size of the membrane about 2 1-2 inches in diameter, a little bulging at birth; the child's legs very active and strong; abnormal flexion of the spine permissible at that point. Otherwise the child is in good health.

"Treatment (probably original): Slight stimulation with iodine; later, applications of wet bichloride gauze, to preserve asepsis. On the fourth day the child seems healthy; the bulging is greater, however, and a reddish granular tissue has covered the membrane, excepting a space the size of a half-dollar coin. Owing to a slight oozing of spinal fluid, no surgical intervention was attempted.

"What is the prognosis and treatment? Should one seek to obtain scar-tissue, to protect the cord until an operation could be performed later? Is spina bifida amenable to immediate treatment?

"2. A parent comes into the office, saying: 'My children have been bitten by a mad dog, and I want to do all that is best for them.' From the symptoms related concerning the dog's action (the dog having been killed immediately), he *was* 'mad'—a strange dog traveling a long distance; but I am not sure whether it was rabies the beast was suffering from. The dog's head was sent to the nearest institution, and the Pasteur treatment commenced on the children, for home administration. What better course could the doctor pursue?

"3. A girl of six years fractured her thigh and her humerus just below the deltoid insertion. Five weeks later she discovered an inability to extend her thumb and fingers. Wanted: information as to cause.

"These are all questions that may at any time come before a practitioner, and, yet, in the library of the ordinary doctor very little if, any at all, is presented."

In your case of spina bifida, surgical procedure is essential; rarely, in these days, is the injection-method employed. Morton's fluid, a composition containing 10 grains of iodine, 30 grains of potassium iodide, and 1 ounce of glycerine, has been favorably regarded, two or three injections being given at intervals of ten days. First of all, an ounce or more of cerebrospinal fluid is withdrawn; then 1-2 ounce of Morton's mixture is injected. However, very few men speak enthusiastically of this procedure.

If the spina bifida is a pure meningocele, the operation is rendered easier through the absence of nervous elements. The sac is exposed and trimmed away through a transverse crescentic skin incision that compasses the base of the tumor, with the convexity of the incision downward. The technic is fully described in any modern work on surgery.

Generally the abnormal window in the bone is small; only rarely the whole of the bony sheath on one side of the cord is absent. In all cases, of course, the prognosis and the possibility of treatment depend upon with what particular variety one has to deal. Of these, there are three; namely: (1) Meningocele, containing membranes and fluid only. Comparatively rare. (2) Meningomyelocele, the membranes, fluid and cord including the cauda equina. (3) Syringomyelocele, a special form of meningomyelocele, with a great dilatation of the central canal and its ependyma.

The subvarieties are numerous. For instance, there are three forms of meningocele. In the simplest, the defect is in the bone alone; the skin, membranes, and cord are intact; and the tumor is composed of the dura mater, this, with its contained fluid, bulging through the bone cleft. In another subvariety, the dura mater as well, as the bone, is cleft. The arachnoid, with its fluid, bulges through this opening, but the skin, pia mater and cord are normal and intact.

Operation shows a reasonable percentage of good results; still, after all is done, it must be remembered that the outcome is doubtful until firm union has been established. The wound may break down and a spinal fistula become established, with the constant attendant danger of infection.

We must remember that myelocele—a deformity characterized by a cleft in the skin itself, an opening in the posterior bony wall of the spinal column and in all the membranes, while the posterior surface of the cord itself is split or absent—is inoperable and

usually results fatally early from septic infection.

In syringomyelocele, the bony wall and the dura mater are cleft, but the arachnoid and pia mater are intact; the central canal being distended with cerebrospinal fluid. The resultant hernia is composed of skin, arachnoid, pia mater, and nerve-elements, the center of the mass being occupied by cerebrospinal fluid.

Myeloceles must be regarded as surgical curiosities. They are commonly associated with other abnormalities—hydrocephalus, club-foot, exstrophy of the bladder, etc.

† You will find a very interesting chapter on this subject in Mumford's "Practice of Surgery."

2. The child having been bitten by a presumably rabid dog requires immediate treatment, i. e., the wound should be freely opened, suction applied, and the tissues cauterized. If at all possible, the dog should be kept alive and under observation for a week. If the animal remains well, there is no rabies; if it dies, brain- and nerve-tissue changes enable us to make a positive diagnosis. In all suspicious cases, the patient should be placed upon the Pasteur treatment at the earliest possible moment.

After the wound has received proper treatment the patient should be given a brisk purge and then receive full doses of nuclein and of echinacea; potassium permanganate or thuja and echinacea may be applied, on compresses, to the wound.

The patient should be reassured. Really, many individuals die from simple fright, and half the dogs who are supposed to be rabid are not affected at all.

3. Paralysis resulting from injury to the nerves at the site of fracture may disappear; it is best to wait developments for a few weeks in primary cases. Massage the limb daily in the meanwhile and exercise the involved extremities. If function does not return, the nerve should be explored, and isolated; if torn, it should be sutured; if compressed, released. In fractures of the humerus, the circumflex, median, ulnar or musculopspiral nerves may be injured; in this case, probably the median.

‡ Do not forget that the nerve may have been severed by the accident, or interposed between fragments or compressed by a displaced fragment or callous.

Besides paralysis of the muscles supplied by the injured nerve, disturbances of sensation in the cutaneous area supplied by it may be observed. Some simple paresthesia or complete anesthesia may be noted. The extent of the latter seldom corresponds exactly to the area supplied by the affected nerve. If the nerve is compressed, there often is severe pain; if it is completely severed, there is no response to galvanic and faradic stimulation after the second week. The affected muscles show an absence of faradic but an increase of galvanic reaction.

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QUERY 5953.—"Extrauterine Fetation." D. M. McD., West Indies, asks advice as to the best time to operate for ectopic pregnancy upon a young woman nineteen years old, seven months pregnant, in first pregnancy. The fetus is entirely free in the abdomen. All the limbs can be easily felt, just beneath the abdominal walls. The uterus can be felt separate and is quite small. The fetus is alive and kicking freely.

Ectopic gestation, we hardly need say, is a highly dangerous condition. When the fetus continues to grow after rupture of the sac, it is a very serious question as to how the case should be managed.

First of all, bear in mind that, under such circumstances, the fetus is much more frequently the subject of defective development than when it develops within the womb. The possibility, even probability, of delivering a deformed child, in connection with the increased danger to the patient from continuation of this abnormal pregnancy, usually renders early interference desirable. Once, however, the fetus reaches the viable age, it may be judged best to afford it an opportunity to live.

The danger from a vital placenta is to be considered; for, its attachment may be such as to involve coils of the intestine or large vessels and, so, its removal be attended with tremendous, even fatal, hemorrhage. Where the placenta is situated inside the sac, so as to permit the removal of both, this should be the operation of election. Where the situation of the placenta is such that it may not be removed, the sac should be packed with gauze, united to the abdominal wound and treatment conducted extraperitoneally. Under the pressure of the gauze, vitality may cease and gradual destruction follow. Or, also, as much of the sac as possible may be removed and the remainder ligated near the placenta, the cord removed, and the abdominal wound closed.

Should the operation terminate favorably, the placenta will be gradually absorbed and disappear. If changes take place, the ma-

terial may be evacuated through a vaginal incision.

The removal of the fetus and the placenta some time after death has taken place is attended with much less danger, for the reason that the latter, no longer being living, is more readily separated without fear of hemorrhage. Should the sac remain any length of time, it may undergo calcareous alteration, when its removal often is accomplished with great difficulty.

Under such circumstances, a mummified or macerated fetus should be removed and the sac attached to the abdominal wall and drained, and its cavity thus finally obliterated.

If possible, doctor, look up this subject in Keen's "Surgery" or in one of the more recent works on obstetric surgery. At all events, a very serious condition confronts you, and you should get the best available assistance.

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QUERY 5954. — "Recent Carbolic - Acid Burn." H. L. H., Texas, recently treated a man who had the misfortune to have a 4-ounce bottle of phenol broken in his hands. The fluid splashed over one side of his face, both arms and the chest. He called to his wife for alcohol and ran to a nearby well, but his wife, being excited, did not get the alcohol until the doctor reached him—about two minutes later. The doctor applied the alcohol, washed off the phenol with soapy water, again applied alcohol, then ice, then applied dressings of mentholated vaseline, cocaine (4 percent solution), fluid extract of belladonna, and also tried hot-water applications. The hot-water applications seemed to relieve the burning (which was almost unbearable for five hours) more than anything else. Our correspondent asks: "Was there anything that I could have applied locally which would have relieved the burning?"

Your patient made a great mistake in the premises in applying water. Had the alcohol been used freely at once, there would have been little, if any, cauterizing, and then the subsequent application of a little mentholated petrolatum or orthofrom or camphor-menthol would have controlled any distress possibly resulting. The ice was not a desirable application. We also doubt the applicability of cocaine or belladonna. You have not told whether the skin was destroyed, or not. You know, of course, that obstinate superficial ulceration often follows the application of phenol.

QUERY 5955.—"Chronic Empyema." C. F., North Carolina, describes an interesting case. The patient, a boy four years old now, at the age of two fell from the top of one chair across the rounds of another. In twenty-four hours the left side of his chest was considerably swollen; intense pain was complained of, and he coughed continually. He was treated for pneumonia, but there was no relief; then for a while for pleuritis, with same negative result. After that, the child passed through the hands of other doctors. Still no relief. Our correspondent first saw this patient in November, 1912. He then was robust, with well-developed muscles and his general health good, except for a "cake" in his side that caused severe pain, troublesome coughing and difficult breathing.

The Doctor prescribed tonics, poultices, ointments, and embrocations. Last spring the boy began to emaciate and "more prominent indications of a local trouble were observed," until in July an abscess formed, this finally rupturing and discharging an immense amount of a thin, whitish, purulent matter. Then a broken rib, with ends overlapping at least 1 1-2 inches, could be accurately diagnosed. The pus, the Doctor thinks, comes from the sharp spicules about the outer ends of the fractured bone. At present a pint of pus is discharged daily from four small perforations, and spurts out from them whenever the child coughs or frets; while the child sometimes even vomits some of the same purulent fluid.

Now our correspondent asks: "What will it do, and what must I do, barring an operation? I am meeting general demands with the alkaloids (to which I attribute his remarkable clinging to life, nature aiding by throwing off this immense amount of poisonous pus) and use some hydrogen peroxide externally, but am afraid to inject it into this cavity."

Without commenting upon the extraordinary lack of diagnostic acumen in the physicians who treated this little fellow prior to November, 1912, we must frankly state that you yourself missed an opportunity to secure a therapeutic triumph.

You are dealing, of course, with chronic empyema, specifically, pyothorax. It is not improbable that a simple 2-inch incision parallel with the rib, evacuation of the pus and insertion of a drainage-tube would have proved curative several months ago.

Of course you are aware that there is a vast difference between acute and chronic empyema, and that the treatment is correspondingly radically different.

In chronic empyema, the pleuræ have become thickened, these membranes assuming the appearance of tough envelopes that encircle the pus-cavities lining the chest-walls and covering the surface of the lung.

Hence, it is clear that the mere aspiration or simple drainage of such a cavity cannot bring about a permanent cure, the stiff wall of the cyst remaining after drainage, holding the lung away from the chest and persisting as a pus-secreting membrane.

There is one chance of saving this little fellow's life, and that is, to place him immediately in the hands of a competent surgeon who will perform either the Estlander, a Schede or Fowler operation. As probably there exists necrosis of one or more ribs, liberal resection of these is essential.

The unfortunate feature of the case is, that the surgeon will now be confronted by a patient greatly weakened by long-continued illness, necessitating that he proceed cautiously. Furthermore, a greater or less deformity of the chest will unavoidably result, and the child go through life with a crippled lung and certainly a depressed vitality.

Even now, however, you may be able to turn the tide, save the child, and make a reputation for yourself, by insisting upon immediate operation. Any other procedure is absolutely useless, especially as penetration of the bronchus has taken place. Do not, doctor, lose any more time!

In the treatment of *all* empyemas, the presence of pus should be ascertained promptly and the moment it is discovered drainage should be instituted. If examination of the chest reveals physical signs of the presence of fluid the nature of which is not apparent, aspirate at once and, if pus is discovered, drain immediately.

Acute empyema treated early is not necessarily a serious condition, but chronic empyema most certainly is. Still, if acute empyema were recognized and promptly properly operated upon, chronic empyema would cease to exist.

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QUERY 5956.—"Stab-Wound of the Lung." O. H. S., Indiana, wishes to know how deep a knife would have to go to penetrate the lung posteriorly; the subject being a medium-sized man and not fleshy? Also, how one can tell when the lung is wounded. Would there be a frothy discharge about the wound?

We regret that you did not give a more definite description of the location of the wound. However, your knowledge of anatomy will enable you to understand that a knife-blade entering near or below the point of the scapula through the latissimus and serratus muscle would have a much less distance to travel to penetrate the lung than it would were it inserted nearer the vertebra, where it might enter the thoracic cavity without wounding the lung. It would be possible, therefore, to reach the lung in the right or left infrascapular region with a 2 1-2-inch blade, whereas in a well-developed man it would take a 3 1-2-inch blade in the interscapular region or the median line.

Remember that the lower limit of the pleura diaphragmatically lies from 1 1-2 to 2 cm. above the costal attachment of the diaphragm, while the lower sharp margin of the lung lies about the same distance above the bottom of the sinus; hence, during expiration a knife entering this area would miss the lung. During deep inspiration the lung descends to the bottom of the space.

The diagnosis of a penetrating wound of the thoracic cavity generally is easy, although in certain instances it may be exceedingly difficult to make. When the lung is injured, there will be cough and in the majority of instances bloody expectoration, with localized pain on respiration, and the development, later, of pneumonia and emphysema. Should air enter the pleural cavity, there may be more or less dyspnea, rapid respiration, and hyperresonance upon percussion. Therefore, frothy bloody expectoration is a distinct evidence of penetration of the lung. It must be remembered also that, if bleeding has occurred, it usually is troublesome; there also will be flatness over the most dependent part of the chest, besides absence of fremitus and respiratory sounds.

With a clearer idea about the location and extent of the wound and its probable direction, together with a knowledge of subsequent conditions in the patient, we may be in a position to comment more intelligently.

The main thing to keep in mind, however, in dealing with pus-cavities anywhere in the body, is to evacuate the pus. This rule applies when the deposit is found within the thorax just the same as when it lies beneath the skin. The difference lies in the greater difficulty in performance and the by no means easy task of removing the source of pus production. However, do not forget that after the cavity is emptied bacterins are usually indicated. To get best results it is necessary to know the kind of microorganism causing the trouble.